S Annual ground
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M26agwsrreport, Livingston
1996 Rail Yard,
Livingston,
Montana

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1996 ANNUAL GROUND WATER REPORT LIVINGSTON RAIL YARD LIVINGSTON, MONTANA

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1996 ANNUAL
GROUND WATER SAMPLING REPORT
LIVINGSTON RAIL YARD
LIVINGSTON, MONTANA

Submitted to:

Montana Department Environmental Quality
Superfund Section
2209 Phoenix Avenue
PO Box 200901
Helena, Montana 59620-0901

Submitted by:

Burlington Northern Railroad Company
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Submittal Date:

September 27, 1996

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TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 GROUND WATER SAMPLE EVENTS 2

2.1 August 1994 Quarterly Ground Water Sampling Event 3

2.2 November 1994 Semiannual Ground Water Sampling Event 3

2.3 May 1996 Annual Ground Water Sampling Event 3

3.0 SAMPLE RESULTS AND DISCUSSION 4

3.1 Ground Water Sample Results 4

3.1.2 VOC Concentration Declines 6

3.1.3 Anomalous VOC Analytical Results 6

3.2 Free-Product Thickness Measurements 6

4.0 CONCLUSIONS 7

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LIST OF TABLES

1.0 PCE Analytical Results

2.0 TCE Analytical Results

3.0 Cis-1,2-DCE Analytical Results

4.0 Apparent Free Product Thickness Measurements

LIST OF FIGURES

1.0 Ground Water Sampling and Water Level Measurement Locations

2.0 May 1996 PCE Concentrations

3.0 May 1996 TCE Concentrations

4.0 May 1996 cis-DCE Concentrations

5.0 Tetrachloroethene Concentrations for Well L-88-10

6.0 Tetrachloroethene Concentrations for Wells L-87-8

7.0 Tetrachloroethene Concentrations for Well L-87-5

8.0 Tetrachloroethene Concentrations for Well 89-4

9.0 Tetrachloroethene Concentrations for Well 89-9

10.0 Cis-1,2-dichloroethene Concentrations for Well L-87-2

11.0 Cis-1,2-dichloroethene Concentrations for Well L-88-10

12.0 Cis-1,2-dichloroethene Concentrations for Well LS-11

13.0 Apparent Free Product Thickness Measurements

LIST OF APPENDICES

APPENDIX A - Laboratory Analytical Results

APPENDIX B - Data Validation Report

1.0 INTRODUCTION

This report is submitted to the Montana Department of Environmental Quality (MDEQ) from Burlington Northern Railroad (BNRR). It presents the results of ground water samples and water level measurements collected during the August 1995 quarterly ground water sample round, the November 1995 semiannual sample round and the May 1996 annual sample round at the Livingston Rail Yard (LRY), in Livingston, Montana. The samples described in this report were collected for BNRR by Envirocon, Inc. of Missoula, Montana.

The LRY is being investigated and remediated under a Modified Partial Consent Decree between BNRR and the MDEQ. The site is underlain by an alluvial aquifer composed of coarse-grained sand and gravel. This aquifer is referred to as the Livingston aquifer. Beneath most of the LRY, the water table of this aquifer is 15 to 25 feet below the ground surface. Beneath parts of the LRY, this aquifer contains a plume of dissolved, chlorinated volatile organic compounds (VOCs). A portion of the LRY is also underlain by a plume of weathered diesel fuel at and near the water table.

Section 2.0 of this report presents the number of samples collected, the sample dates, and the analytical methods used for each sample event. Section 3.0 presents the analytical results of ground water samples taken during the sample events. Results are presented on tables showing all three sample events and on maps showing the extent of dissolved chlorinated VOCs based on the May 1996 analytical results. The long-term declines in VOC concentrations are illustrated on graphs showing chlorinated VOC concentrations at specific wells during all ground water sample events since May 1989.

1.0 INTRODUCTION

This report is submitted to the Montana Department of Environmental Quality (MDEQ) from Burlington Northern Railroad (BNRR). It presents the results of ground water samples and water level measurements collected during the August 1995 quarterly ground water sample round, the November 1995 semiannual sample round and the May 1996 annual sample round at the Livingston Rail Yard (LRY), in Livingston, Montana. The samples described in this report were collected for BNRR by Envirocon, Inc. of Missoula, Montana.

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Section 2.0 of this report presents the number of samples collected, the sample dates, and the analytical methods used for each sample event. Section 3.0 presents the analytical results of ground water samples taken during the sample events. Results are presented on tables showing all three sample events and on maps showing the extent of dissolved chlorinated VOCs based on the May 1996 analytical results. The long-term declines in VOC concentrations are illustrated on graphs showing chlorinated VOC concentrations at specific wells during all ground water sample events since May 1989.

2.0 GROUND WATER SAMPLE EVENTS

The ground water sampling events covered in this report include the August 1995 quarterly event, the November 1995 semiannual event, and the May 1996 annual sampling event. All ground water samples taken during the these sample events were analyzed for purgeable halocarbons by EPA Method 601. All analyses were performed at Energy Laboratories, Inc. in Billings, Montana.

The August and November 1995 sample rounds were conducted under the ground water sampling schedule approved by the MDEQ in August 1992. All monitor wells scheduled for sampling during August and November events were sampled with the exception of Well 2 which was mistakenly not sampled during the November 1995 round.

In February 1996, at the request of BNRR, the MDEQ modified the ground water sampling schedule. The modified sampling schedule specifies the sampling of twenty-eight monitoring and private wells during the annual sample round and twelve monitoring wells during the semiannual sample round. During the May 1996 annual sample round, twenty-five of the scheduled twenty-eight monitoring wells were sampled. The three wells that were not sampled were the Rainbow private well and monitoring wells 89-9 and 1. The Rainbow well could not be sampled during May 1996 because its owner had not yet set up the well for summer irrigation use. Monitoring well 89-9 could not be sampled during May due to the presence of heavy machinery inside the Locomotive Shop covering the flush-mount well cover of this well. Monitoring well 1 was mistakenly not sampled during May 1996.

The locations of all sample points are shown on Figure 1.0. Tables 1, 2, and 3 summarize the analytical results for tetrachloroethene (PCE); trichloroethene (TCE); and cis-1,2-dichloroethene (DCE), respectively.

Laboratory analytical results are presented in Appendix A. A data validation report is included as Appendix B. The details of each sample event are presented below.

2.1 August 1994 Quarterly Ground Water Sampling Event

The August 1995 quarterly sampling event was conducted August 21 through September 6, 1995. Twenty-seven samples were analyzed as part of this event: 19 were primary samples collected at monitoring wells within and around the LRY, five samples were field duplicates; and three samples were equipment-decontamination blanks.

2.2 November 1994 Semiannual Ground Water Sampling Event

The November 1995 semiannual sampling event was conducted November 29 through December 3, 1995. Twenty-four samples were analyzed as part of this event: 20 were primary samples collected at monitoring wells; three samples were field duplicates; and one sample was an equipment decontamination blank.

2.3 May 1996 Annual Ground Water Sampling Event

The May 1996 annual ground water sampling event was conducted May 20 through 29, 1996. Twenty-nine samples were analyzed as part of this event: 25 were primary samples collected at monitoring and private wells; three samples were field duplicates; and one sample was an equipment decontamination blank.

3.0 SAMPLE RESULTS AND DISCUSSION

This section presents the results of samples taken during the quarterly, semiannual, and annual sampling events between August 1995 and May 1996. All analytical results for PCE, TCE, and cis-DCE are presented in on Tables 1 through 3 respectively. Sample results from the May 1996 sample event are also presented on Figures 2.0 through 4.0 showing the aerial distribution of dissolved PCE, TCE, and cis-DCE concentrations.

The apparent thickness of the free product was measured in monitor and observation wells during the three sample events. Thickness measurements represent the "apparent" free product thickness as opposed to the actual thickness. The apparent thickness of free product is approximately two to four times greater than the actual free product thickness in the aquifer. All thickness measurements are listed in Table 4.0.

3.1 Ground Water Sample Results

Ground water samples collected during the August 1995 through May 1996 sampling events contained dissolved chlorinated-VOC concentrations that continued the long-term decline observed during the past six years. These concentration declines are a result of the limited total mass of chlorinated VOCs originally present at the LRY and also VOC removal during the source control activities instituted on the LRY during the Remedial Investigation (RI) and the Feasibility Study (FS). Source control activities were described in the Final Remedial Investigation Report (Envirocon, 1994).

Figure 2.0 shows the distribution of dissolved PCE based on the May 1996 annual sample round. PCE is present in a plume stretching from the Electric Shop northeastward past the Yellowstone River. Although PCE is detectable over a large area, PCE concentrations above 100 ug/l are restricted to the area

beneath and downgradient from the northern half of the Electric Shop and the center of the Locomotive Shop. The remainder of the plume contains PCE concentrations of less than 100 ug/l.

Figure 3.0 shows the distribution of dissolved TCE based on the May 1996 sample event. Most monitoring wells contained TCE concentrations below the 5 ug/l Maximum Contaminant Level (MCL). TCE concentrations above the 5 ug/l MCL are restricted to a narrow area stretching from the Waste Water Treatment Plant (WWTP) northeastward towards the Yellowstone River.

Figure 4.0 shows the distribution of cis-DCE concentrations in the aquifer for May 1996. No cis-DCE concentrations were detected above the 70 ug/l MCL during this sample event. The primary source area for cis-DCE is the WWTP area, including the WWTP grit chambers and the WWTP sump.

Monitoring wells 94-1 and 94-2 are east of the map area shown in Figure 1.0. Monitoring well 94-1 is located approximately 1,000 feet east of the Yellowstone River and 1,500 feet north of Highway 89. Monitor Well 94-2 is located approximately 1,000 feet east of the Yellowstone River and 100 feet south of Highway 89. Sample results on Table 1.0, reveal that from August 1995 through May 1996, Well 94-1 contains PCE concentrations of 1.5 to 1.8 ug/l and Well 94-2 contained a PCE concentration below the 0.5 ug/l detection limit. These concentrations are all below the 5 ug/l MCL for PCE.

Vinyl chloride was detectable in ground water samples from well L-87-2 at concentrations ranging from 16 to 43 ug/l. It is suspected that this vinyl chloride is created by degradation of cis-1,2-DCE in the hydrocarbon smear zone beneath the WWTP area. Vinyl chloride was also detectable, at concentrations ranging from 0.78 to 1.6 ug/l, in samples from well L-88-10, downgradient from the WWTP. The MCL for vinyl chloride is 2 ug/l.

3.1.2 VOC Concentration Declines

The overall decline in dissolved chlorinated VOC concentrations is illustrated by plotting the VOC concentrations from specific wells between May 1989 and May 1996. Figures 5.0 through 9.0 show the PCE concentrations declines in wells L-88-10, L-88-8, L-87-5, 89-4, and 89-9. These wells are representative of a large portion to the PCE plume. PCE concentrations in these wells have declined an average of 80 percent since May 1989.

The decline in cis-1,2-DCE concentrations has been greater than that of PCE. Figures 10.0 and 12.0 show the cis-1,2-DCE concentration declines in monitoring wells L-87-2, L-88-10, and LS-11. These three wells span the area in which cis-1,2-DCE concentrations are elevated in Figure 4.0.

3.1.3 Anomalous VOC Analytical Results

Most VOC results from this reporting period are consistent with previous sample rounds; however, the cis-1,2-DCE concentrations measured at Well 92-1 are anomalous. As shown on Table 4.0, prior to August 1995, the cis-1,2-DCE concentration at this well was low; however, since August 1995, the concentration has risen to 21 ug/l. While this is still well below the 70 ug/l MCL for cis-1,2-DCE, the increase is anomalous compared to previous data. The cause of this increase is not know at this time.

3.2 Free-Product Thickness Measurements

Table 5.0 shows all of the free-product thickness measurements taken between August 1994 and May 1996. Figure 13.0 shows the general outline of the free product plume, the location of all wells measured during May 1996, and the May free product thickness measurements. As shown on Figure 13.0, many

of the wells within the general outline of the free product plume do not contain any measurable free product. Moreover, of the wells containing measurable free product, most contain less than one-quarter-foot total apparent thickness. Assuming that apparent product thickness is two to four times the actual thickness, this reveals that the majority of the plume contains less than one inch of free product.

4.0 CONCLUSIONS

This report presents the results of the seventh complete year of ground water sampling at the LRY. The two primary ground water concerns at the LRY are a plume of dissolved chlorinated VOCs in the aquifer and a plume of free and residual diesel fuel at the water table. These two plumes had separate source areas and only partially overlap.

Both the concentrations of dissolved VOCs and the apparent thickness of the free product plume have decline since 1989. The 1995 and 1996 ground water monitoring results indicate that this declining trend is continuing. At most monitoring well locations, the dissolved chlorinated VOC concentrations have declined more than 80 percent since 1989. The apparent thickness of the free product plume has declined to the point where free product recovery has not been practical in any of the recovery tests.

The Final Remedial Investigation Report was submitted to the MDEQ in March 1994. The Draft Final Primary Hydrocarbon Feasibility Study Report was submitted to the MDEQ on May 8, 1996. The Draft Final Feasibility Study Report covering soil and ground water was submitted to the MDEQ on September 13, 1996. Once these two documents are finalized, the MDEQ will select a final remedy. At this point there are no recommended modifications to the ground water sampling schedule or any other operations at the LRY.

TABLES

Table 1.0
PCE Analytical Results
1996 Annual Ground Water Report

Sample Location	May 1995 (ug;l)	August 1995 (ug/l)	November 1995 (ug/l)	May 1996 (ug/l)
1	<0.5		<0.5J	
2	0.6			<0.5J
3	<0.5			<0.5J
4	<0.5			<0.5J
5	<0.5	0.59	0.63	<0.5J
6	1.2		1.2	1.4
7	9.6			
8	59			
89-1	8.8			
89-2	<0.5	<0.5	<0.5	<0.5
89-3	241	186	199	205
89-4	<0.5	103	84	137
89-6	16			16
89-7	10			
89-9	71	59	62	
89-10	61			55
90-2B	60			
90-3	37			29
90-6	<0.5	0.76	0.73	
92-1	88	124	109	55
92-2	18	24	27	9.7
92-3	<0.5	0.75	<0.5J	
92-4	34	2.1	4.4	28
94-1	2.5	1.5	2.4	1.8
94-2	<0.5	<0.5J	<0.5J	<0.5J
L-87-2	<0.5	1.3[2]	1.8	<0.5
L-87-3	88	69	89	76
L-87-4	<0.5			<0.5
L-87-5	57	61	51	64
L-87-7	<0.5			
L-87-8	3.7	2.8	3.9	2.4
L-88-10	44	29	40	30
L-88-13	19			16
L-88-9	<0.5			
LS-6	<0.5			
LS-11	37	14	20	34
HRO-10	<0.5			
VE-50	<0.5			
B-Street	5.4 (<0.5)[1]			<0.5
Rainbow	11			

Notes: [1] - Sample in parenthesis is a followup sample taken during June 1995.
[2] - Value is from a field duplicate sample. Original sample detection limit was too high due to foaming in sample bottle.
J - Detectable but less than the practical quantification limit.

Table 2.0
TCE Analytical Results
1996 Annual Ground Water Report

Sample Location	May 1995 (ug/l)	August 1995 (ug/l)	November 1995 (ug/l)	May 1996 (ug/l)
1	<0.5		<0.5	
2	<0.5			<0.5
3	<0.5			<0.5
4	<0.5			<0.5
5	<0.5	<0.5	<0.5	<0.5
6	<0.5		<0.5	<0.5
7	<0.5			
8	3.2			
89-1	<0.5			
89-2	<0.5	<0.5	<0.5	<0.5
89-3	1.8	0.73	0.59	1.4
89-4	1.6	1.6	1.5	1.2
89-6	<0.5			<0.5J
89-7	3.4			
89-9	3.4	2.9	2.7	
89-10	5.1			5.5
90-2B	9.6			
90-3	3.0			2.6
90-6	<0.5	<0.5	<0.5	
92-1	<0.5	<0.5J	<0.5J	<0.5J
92-2	2.1	3.0	3.7	0.67
92-3	<0.5	<0.5	<0.5	
92-4	1.8	<0.5	1.0	1.4
94-1	<0.5	<0.5	<0.5	<0.5
94-2	<0.5	<0.5	<0.5	<0.5
L-87-2	13	2.9[1]	3.7	14
L-87-3	8.6	6.1	8.8	8.3
L-87-4	<0.5			<0.5
L-87-5	3.2	3.5	3.0	3.4
L-87-7	<0.5			
L-87-8	1.6	1.1	1.9	2.2
L-88-10	12	12	15	11
L-88-13	3.4			2.5
L-88-9	<0.5			
LS-6	<0.5			
LS-11	6.3	6.4	6.8	6.8
HRO-10	9.9			
VE-50	16			
B-Street	<0.5			<0.5
Rainbow	1.8			

Notes:

[1] - value is from a field duplicate sample. Original sample detection limit was too high due to foaming in sample bottle.

J - Detectable but below practical quantification limit.

Table 3.0
cis-1,2-DCE Analytical Results
1996 Annual Ground Water Report

Sample Location	May 1995 (ug/l)	August 1995 (ug/l)	November 1995 (ug/l)	May 1996 (ug/l)
1	<0.5		<0.5	
2	<0.5			<0.5
3	<0.5			<0.5
4	<0.5			<0.5
5	<0.5	<0.5	<0.5	<0.5
6	<0.5		<0.5	<0.5
7	<0.5			
8	3.0			
89-1	<0.5			
89-2	<0.5	<0.5	<0.5	<0.5
89-3	<0.5	<0.5	<0.5	0.54
89-4	0.7	1.7	3.1	2.9
89-6	<0.5			<0.5
89-7	3.4			
89-9	1.0	1.0	1.1	
89-10	11			8.3
90-2B	12			
90-3	5.1			2.8
90-6	<0.5	<0.5	<0.5	
92-1	1.1	8.6	12	21
92-2	3.6	6.0	4.1	0.74
92-3	<0.5	<0.5	<0.5	
92-4	<0.5	<0.5	<0.5J	0.81
94-1	<0.5	<0.5	<0.5	<0.5
94-2	<0.5	<0.5	<0.5	<0.5
L-87-2	34	52	88	23
L-87-3	17	9.5	11	14
L-87-4	<0.5			<0.5
L-87-5	1.0	1.0	1.2	0.91
L-87-7	<0.5			
L-87-8	<0.5	0.66	1.4	0.55
L-88-10	37	22	39	16
L-88-13	1.5			0.68
L-88-9	<0.5			
LS-6	<0.5			
LS-11	12	19	9.0	10
HRO-10	23			
VE-50	47			
B-Street	<0.5			<0.5
Rainbow	2.3			

Notes:

[1] - value is from a field duplicate sample. Original sample detection limit was too high due to foaming in sample bottle.

J - Detectable but below practical quantification limit.

Table 4.0

Apparent Free Product Thickness Measurements
August 1994 through May 1996
Livingston Rail Yard, Livingston, Montana

Well	Aug-94	Nov-94	Feb-95	May-95	Aug-95	Nov-95	May-96	Average
LS-7	0.09	Well abandoned in 12/94						**0.09**
LB-4	0.48	0.81	0.12	0.45	0.65			**0.50**
L-87-2	ND	ND	ND	ND	ND	ND	ND	**N/A**
L-87-4	0.11		ND	ND	0.19	0.1		**0.13**
L-87-7	0.3	0.68	0.78	0.24	0.65	0.7	0.24	**0.51**
L-87-8	0.43	0.15	1.35	0.12	0.31	0.27	0.11	**0.39**
HRO-6	0.25	0.56	0.63	0.36	0.52		0.65	**0.50**
HRO-8		0.21			ND			**0.21**
HRO-9	0.02		0.06				0.03	**0.04**
HRO-10		ND	<0.01		<0.01		ND	**N/A**
HRO-11		0.11		0.23	ND			**0.17**
HRO-12	ND	ND	<0.01	ND	ND		ND	**N/A**
HRO-13	ND	ND	ND	ND	ND		ND	**N/A**
HRO-14		ND	ND	<0.01			ND	**N/A**
HRO-15	0.06	0.07	0.07	<0.01				**0.07**
HRO-16	ND	0.09	0.5	0.04				**0.21**
HRO-20	ND	<0.01	0.13	ND	0.06	0.16	0.03	**0.10**
HRO-21	ND	<0.01	<0.01	ND	ND	<0.01	ND	**N/A**
HRO-22	<0.01	<0.01	ND	<0.01	ND	0.01	ND	**0.01**
HRO-23	<0.01	<0.01	ND	ND	ND		ND	**N/A**
HRO-24	ND	0.08	0.14	0.01	0.14	0.24	ND	**0.12**
RW-1		<0.01	ND	0.01			ND	**0.01**
RW-2		<0.01	ND	<0.01			ND	**N/A**
RW-3		0.04	0.03	<0.01				**0.04**
RW-4		0.16	ND	0.16			0.4	**0.24**
RW-5		0.09	0.07	0.24				**0.13**
RW-6		1.07	0.14*	0.22*			0.13	**0.60**
RW-7	0.04	0.02	0.4	0.04	0.19	0.25	ND	**0.16**
RW-8	<0.01	0.01	0.02	0.03	0.15	0.17		**0.08**
RW-9	ND	ND	ND	ND	ND	0.01	ND	**0.01**
LG-11							ND	**N/A**
LG-12							ND	**N/A**
95-1							ND	**N/A**
LPZ-100		0.09	0.04					**0.07**

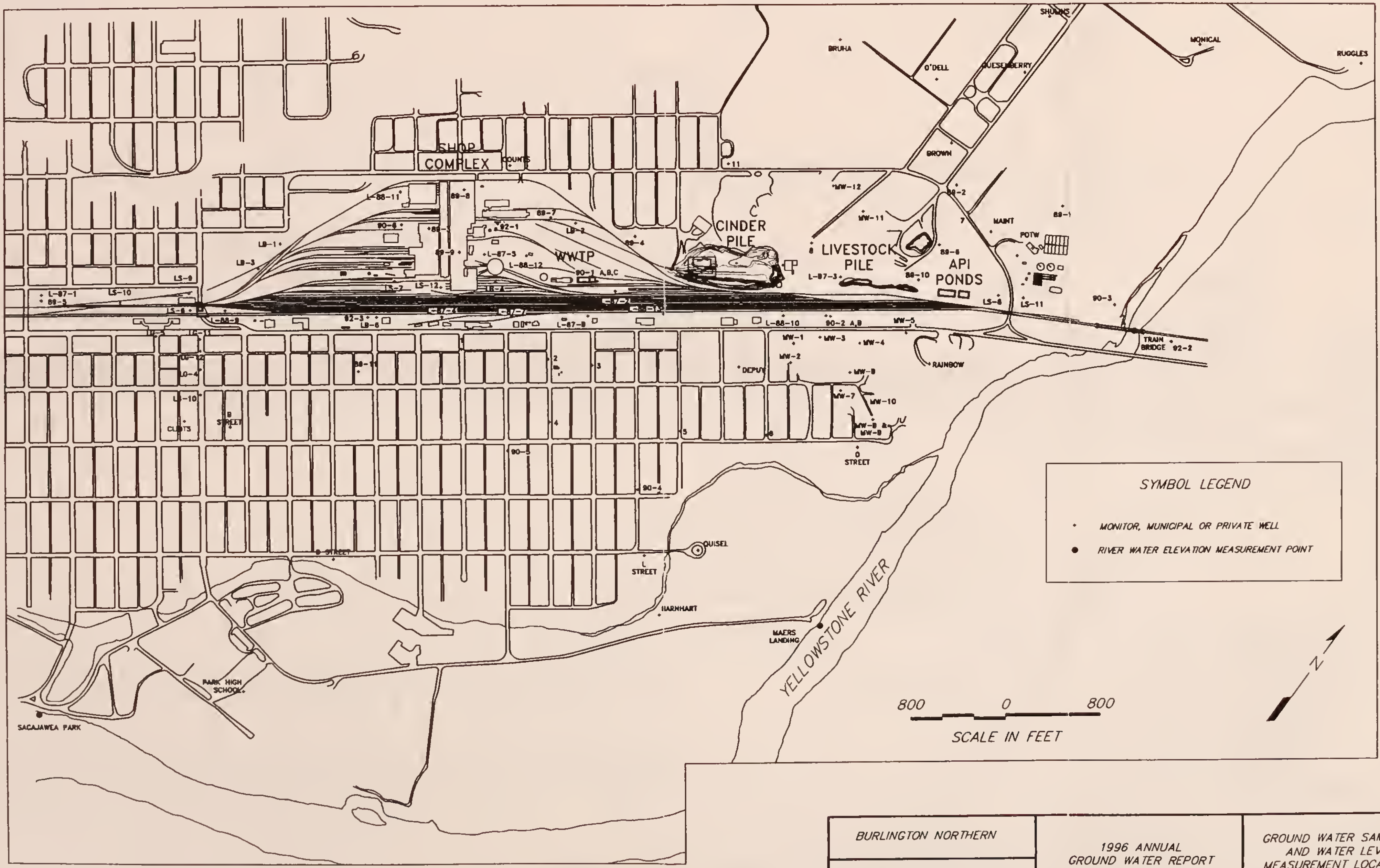
Notes:

ND - no product detected

<0.01 - trace of product detected but less than resolution of product probe

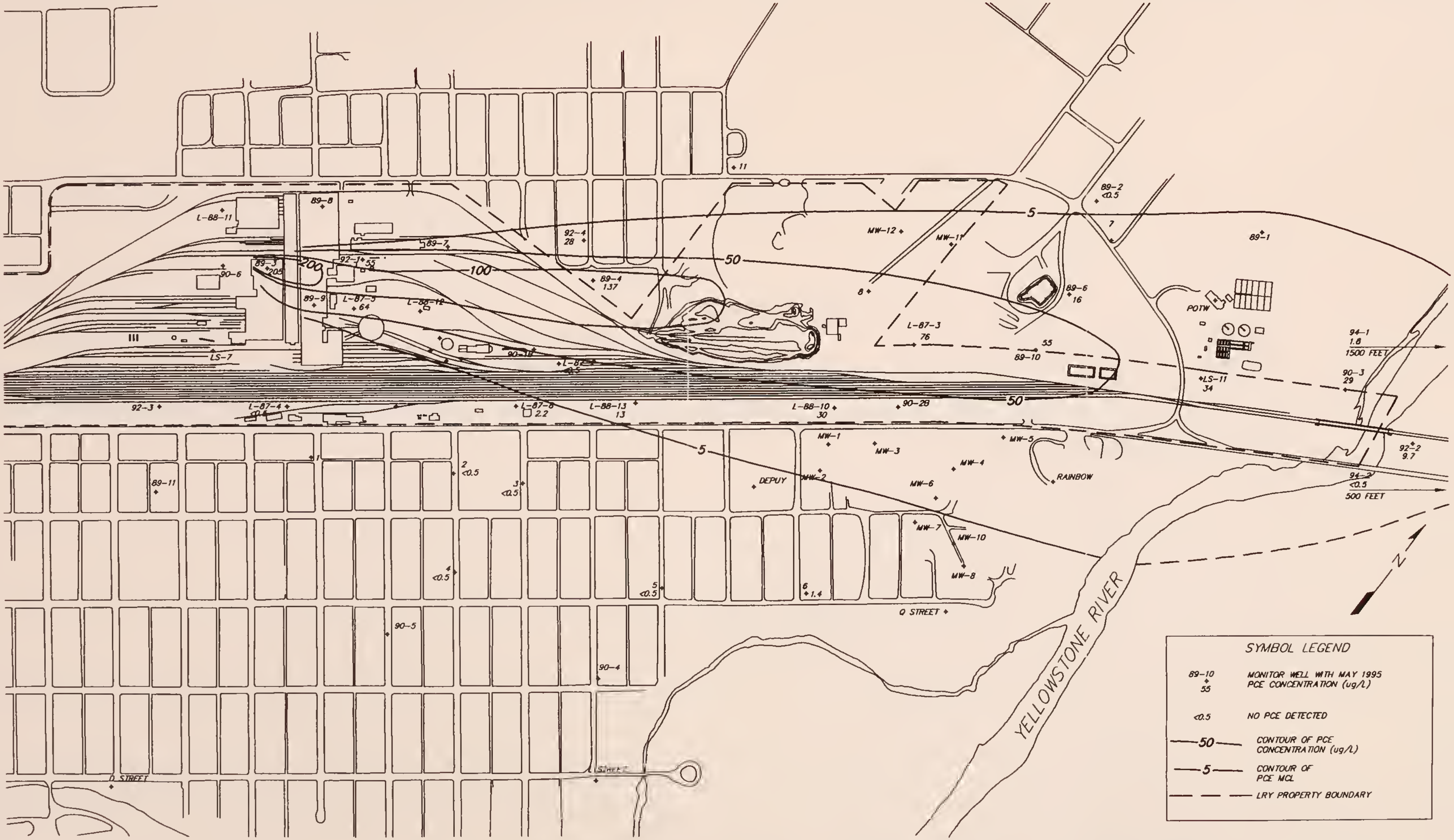
* - Approximately 35 gallons of product recovered from Well RW-6 during December 1994.

FIGURES



BURLINGTON NORTHERN	1996 ANNUAL GROUND WATER REPORT	GROUND WATER SAMPLING AND WATER LEVEL MEASUREMENT LOCATIONS	
ENVIROCON, INC.	140101	7/30/96	FIGURE 1.0

FILE: GWR-001.dwg



500 0 500
SCALE IN FEET

BURLINGTON NORTHERN

ENVIROCON, INC.

1996 ANNUAL GROUND WATER REPORT

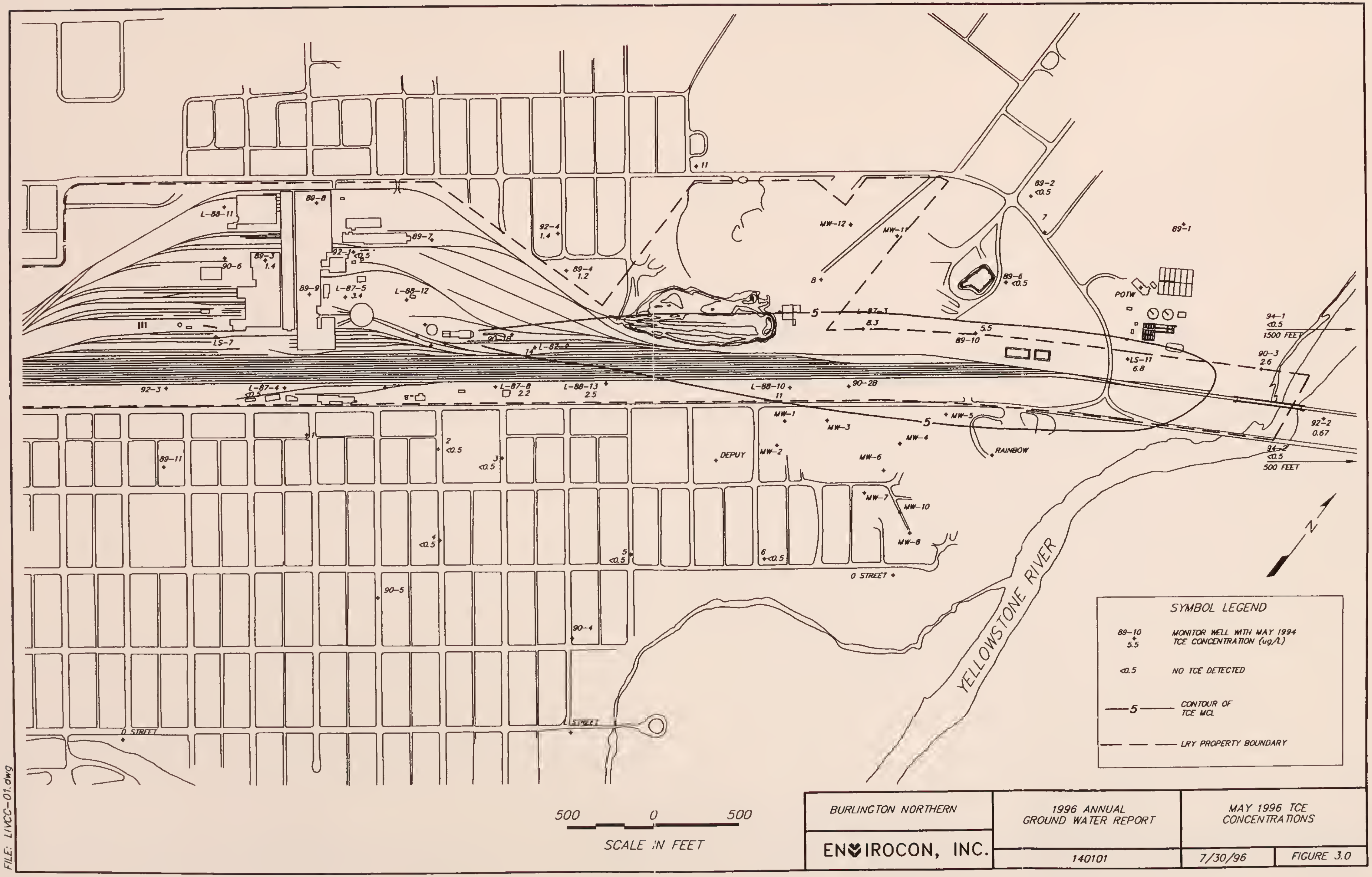
MAY 1996 PCE CONCENTRATIONS

140101

7/30/96

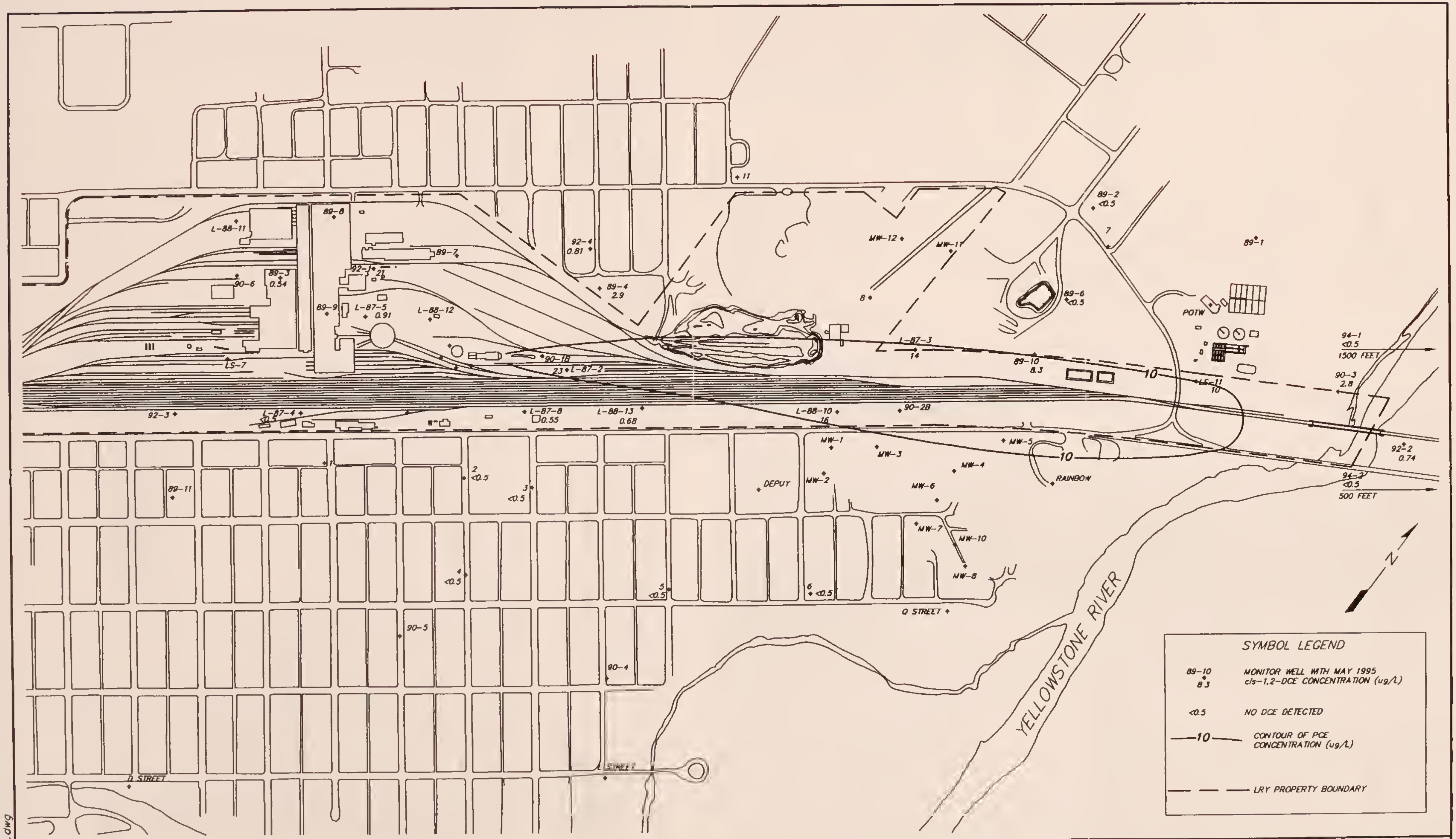
FIGURE 2.0

FILE: LIVCC-01.dwg



BURLINGTON NORTHERN	1996 ANNUAL GROUND WATER REPORT	MAY 1996 TCE CONCENTRATIONS	
ENVIROCON, INC.	140101	7/30/96	FIGURE 3.0

FILE: LIVCC-01.dwg



BURLINGTON NORTHERN

ENVIROCON, INC.

1996 ANNUAL
GROUND WATER REPORT

140101

MAY 1996
cis-1,2-DCE
CONCENTRATIONS

7/30/96

FIGURE 4.0

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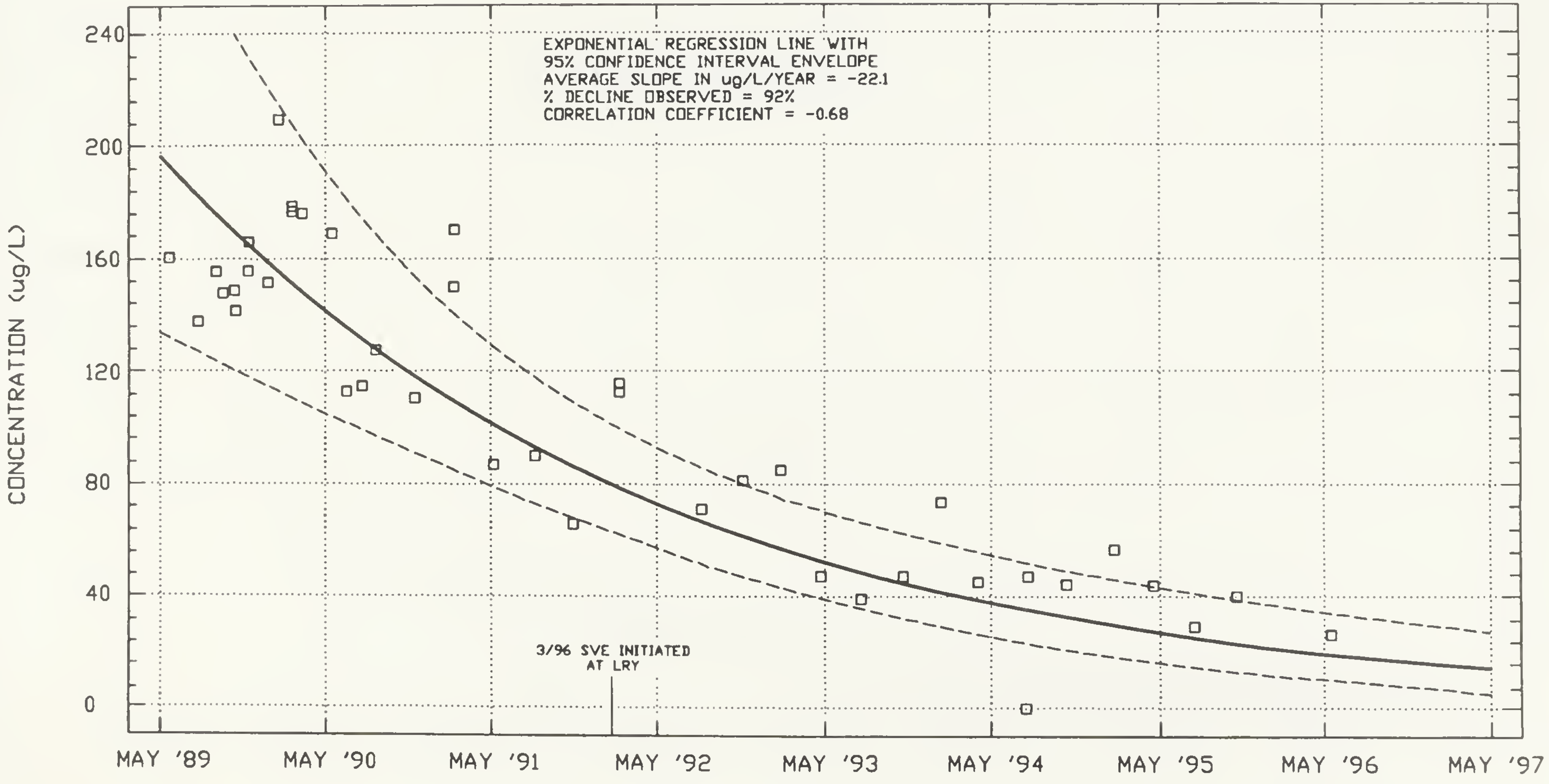
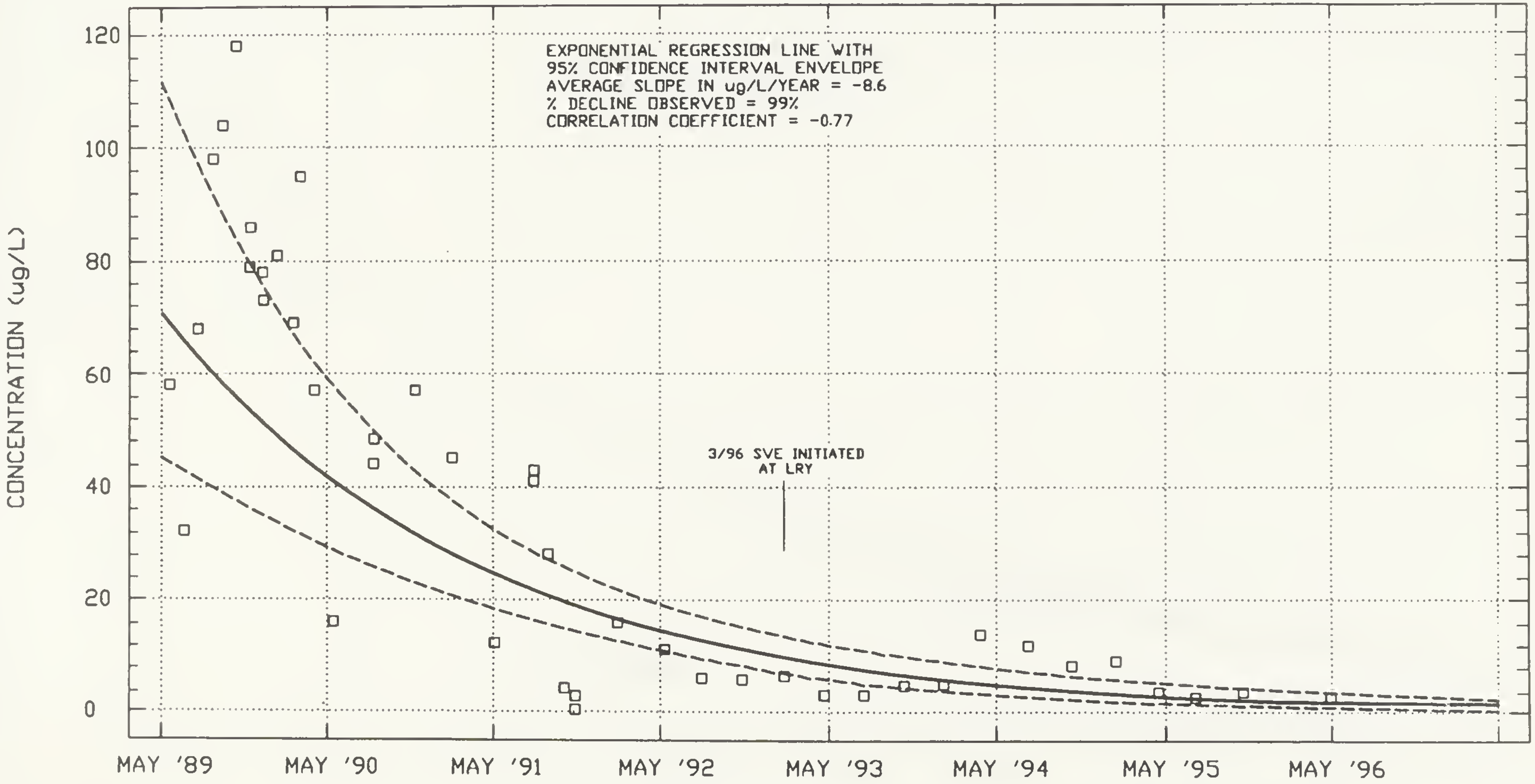


ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
1997 - 2006

BURLINGTON NORTHERN	*1996 ANNUAL GROUNDWATER REPORT LIVINGSTON RAIL YARD LIVINGSTON, MONTANA*	*TETRACHLOROETHENE CONCENTRATIONS FOR WELL L-88-10*
ENVIROCON, INC.	*AutoCad FILE: PCEL8810.DWG*	*7/9/96* — *FIGURE 5.0*



ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
1993 - 1996

BURLINGTON NORTHERN

ENVIROCON, INC.

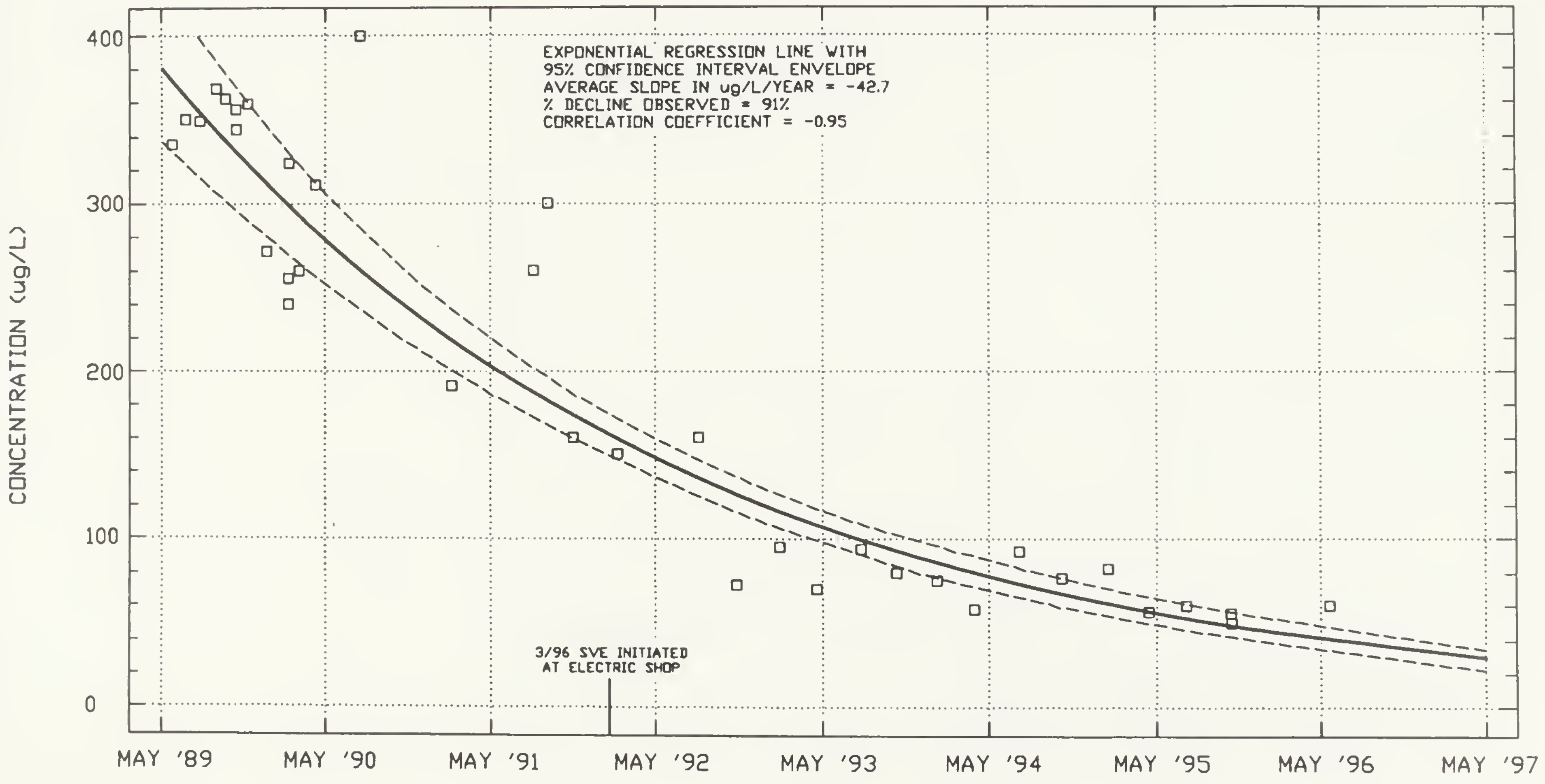
1996 ANNUAL
GROUNDWATER REPORT
LIVINGSTON RAIL YARD
LIVINGSTON, MONTANA

AutoCad FILE: PCEL878.DWG

TETRACHLOROETHENE
CONCENTRATIONS
FOR WELL L-87-8

7/9/96

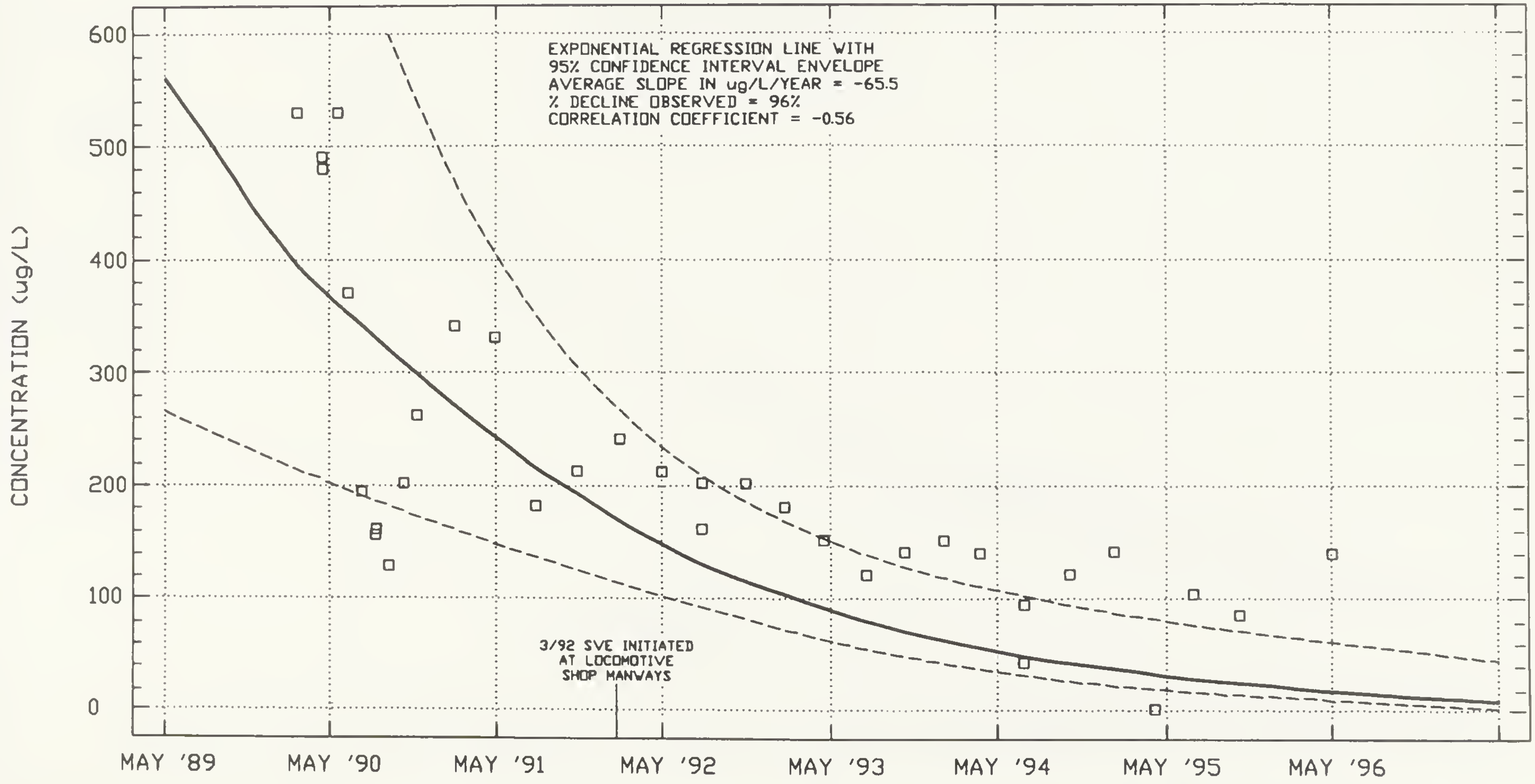
FIGURE 6.0



ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
2001 - 2005

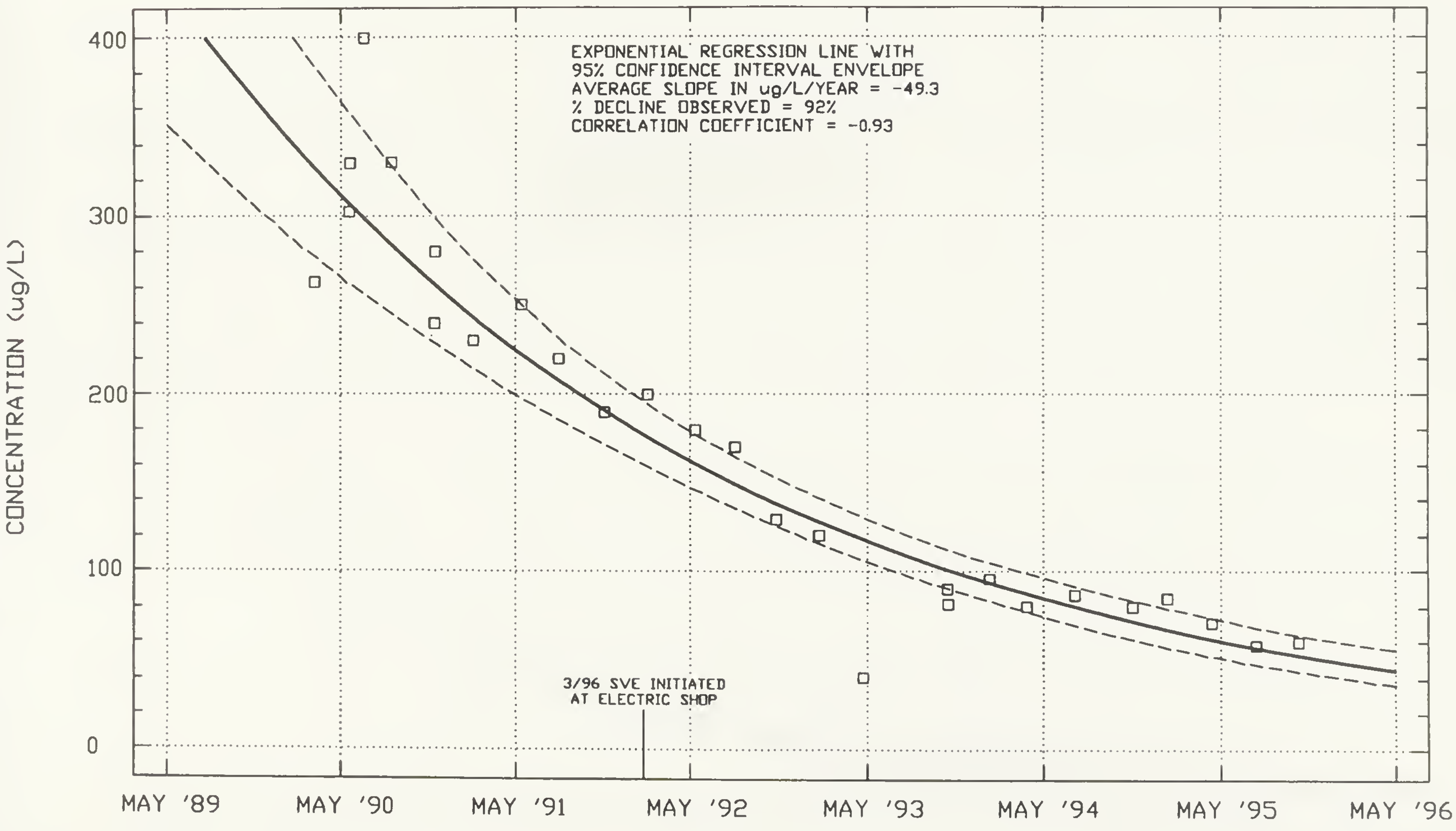
BURLINGTON NORTHERN	*1996 ANNUAL* *GROUNDWATER REPORT* *LIVINGSTON RAIL YARD* *LIVINGSTON, MONTANA*	*TETRACHLOROETHENE* *CONCENTRATIONS* *FOR WELL L-87-5*
ENVIROCON, INC.	*AutoCad FILE: PCEL875.DWG*	*7/9/96* | *FIGURE 7.0*



ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
1997 - 2007

BURLINGTON NORTHERN	1996 ANNUAL GROUNDWATER REPORT LIVINGSTON RAIL YARD LIVINGSTON, MONTANA	TETRACHLOROETHENE CONCENTRATIONS FOR WELL 89-4
ENVIROCON, INC.	AutoCad FILE: PCE894.DWG	7/9/96
		FIGURE 8.0

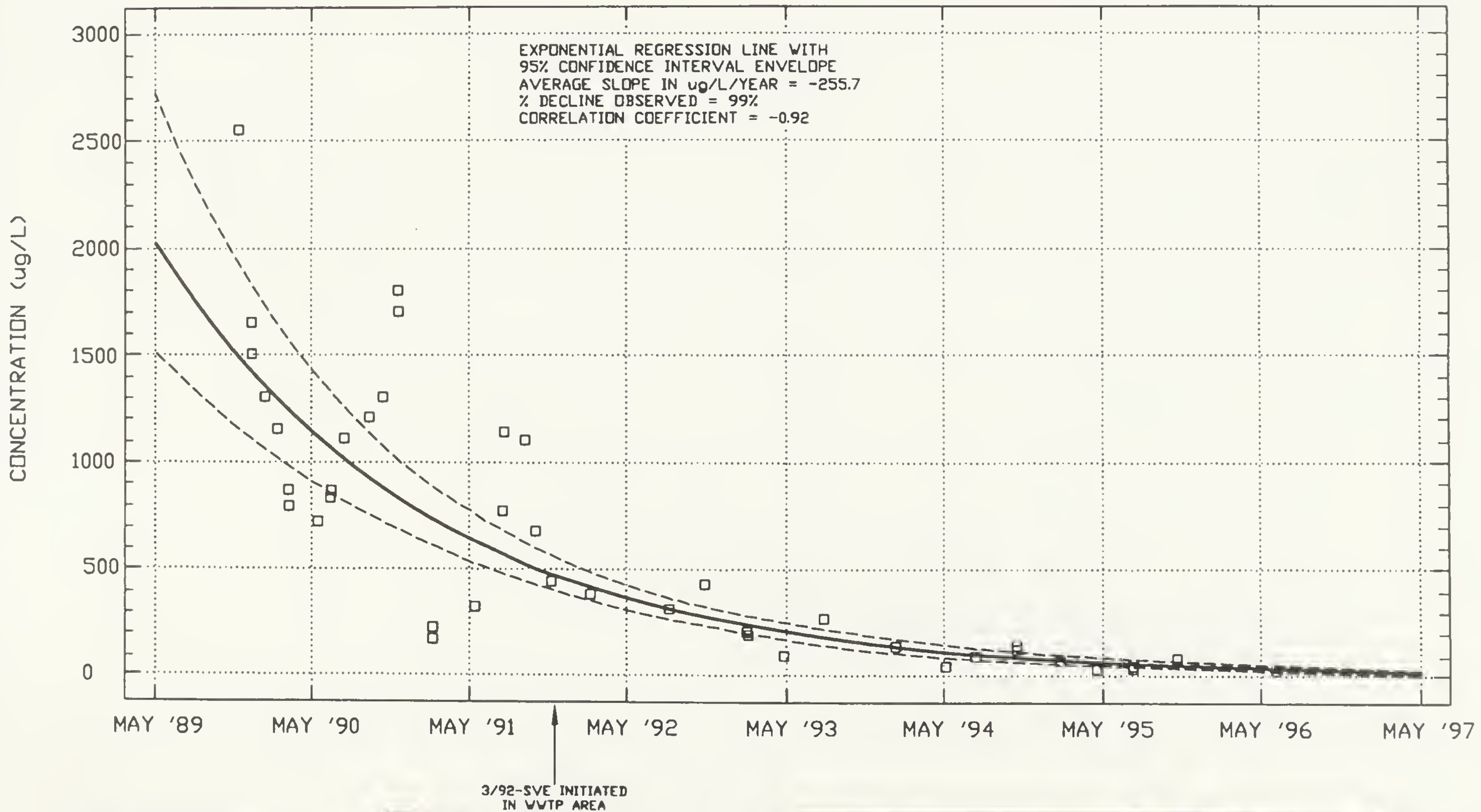


NO SAMPLE COLLECTED MAY '96

ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
2001 - 2006

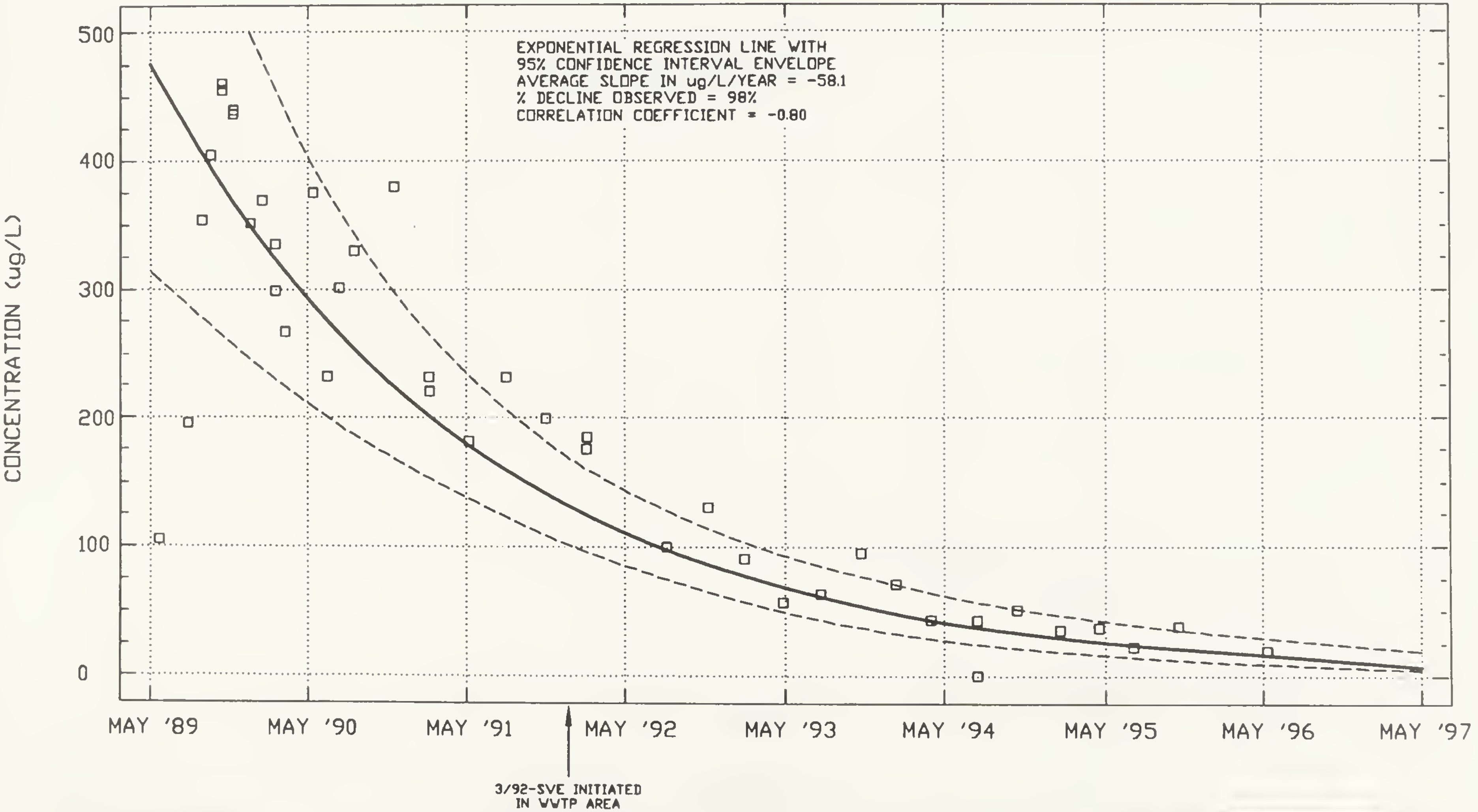
BURLINGTON NORTHERN	*1996 ANNUAL GROUNDWATER REPORT LIVINGSTON RAIL YARD LIVINGSTON, MONTANA*	*TETRACHLOROETHENE CONCENTRATIONS FOR WELL 89-9*
ENVIROCON, INC.	*AutoCad FILE: PCE899.DWG*	*7/9/96* — *FIGURE 9.0*



ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
1994 - 1996

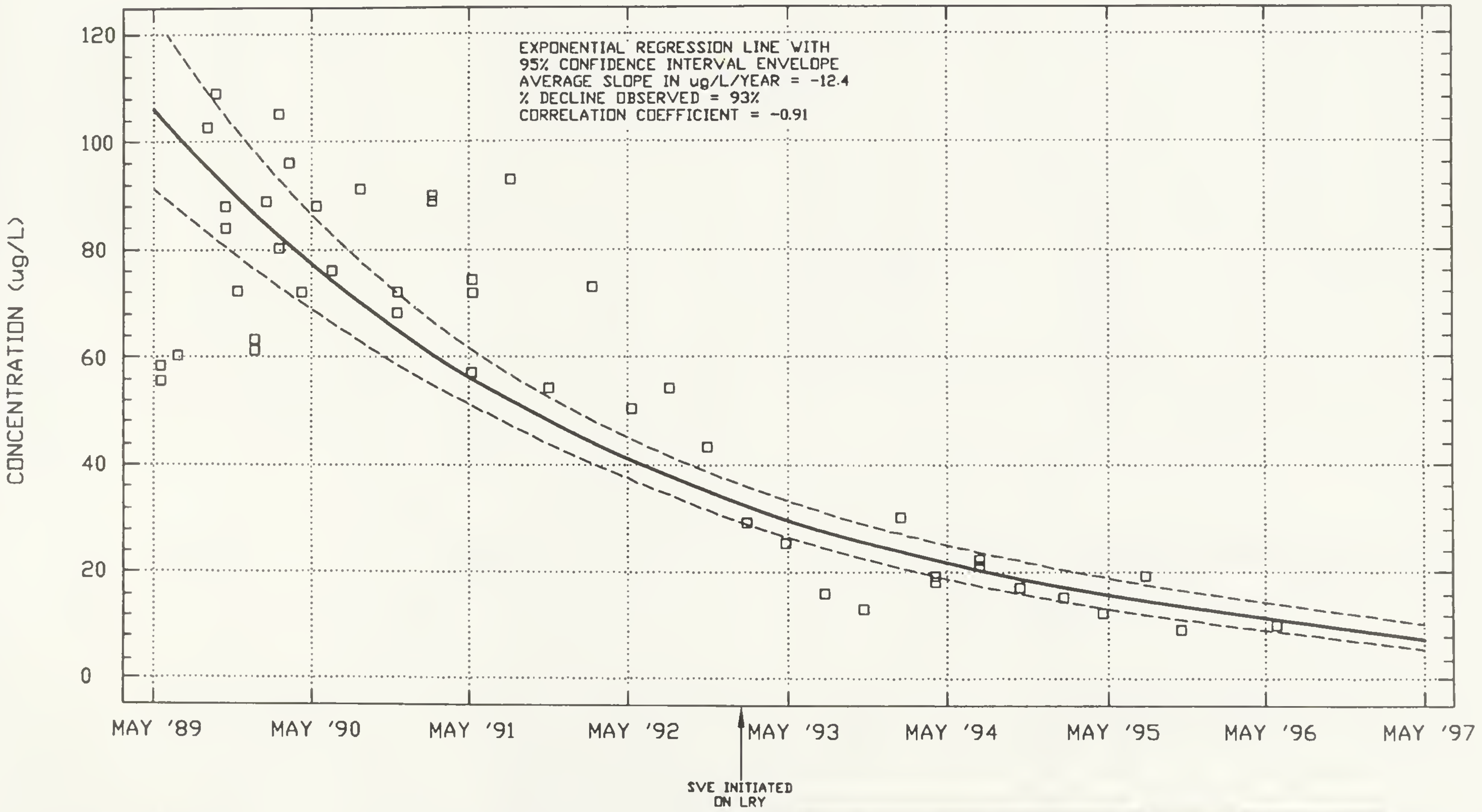
BURLINGTON NORTHERN	1996 ANNUAL GROUNDWATER REPORT LIVINGSTON RAIL YARD LIVINGSTON, MONTANA	cis-1,2 DICHLOROETHENE CONCENTRATIONS FOR WELL L-87-2
ENVIROCON, INC.	AutoCad FILE: DCEL872.DWG	7/9/96
		FIGURE 10.0



ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
1992 - 1994

BURLINGTON NORTHERN ENVIROCON, INC.	1996 ANNUAL GROUNDWATER REPORT LIVINGSTON RAIL YARD LIVINGSTON, MONTANA AutoCad FILE: DCEL8810.DWG	cis-1,2 DICHLOROETHENE CONCENTRATIONS FOR WELL L-88-10 7/9/96 FIGURE 11.0



ESTIMATED TIME FRAME
FOR COMPLIANCE
WITH MCL LEVELS

BETWEEN YEARS
1989 - 1990

BURLINGTON NORTHERN

ENVIROCON, INC.

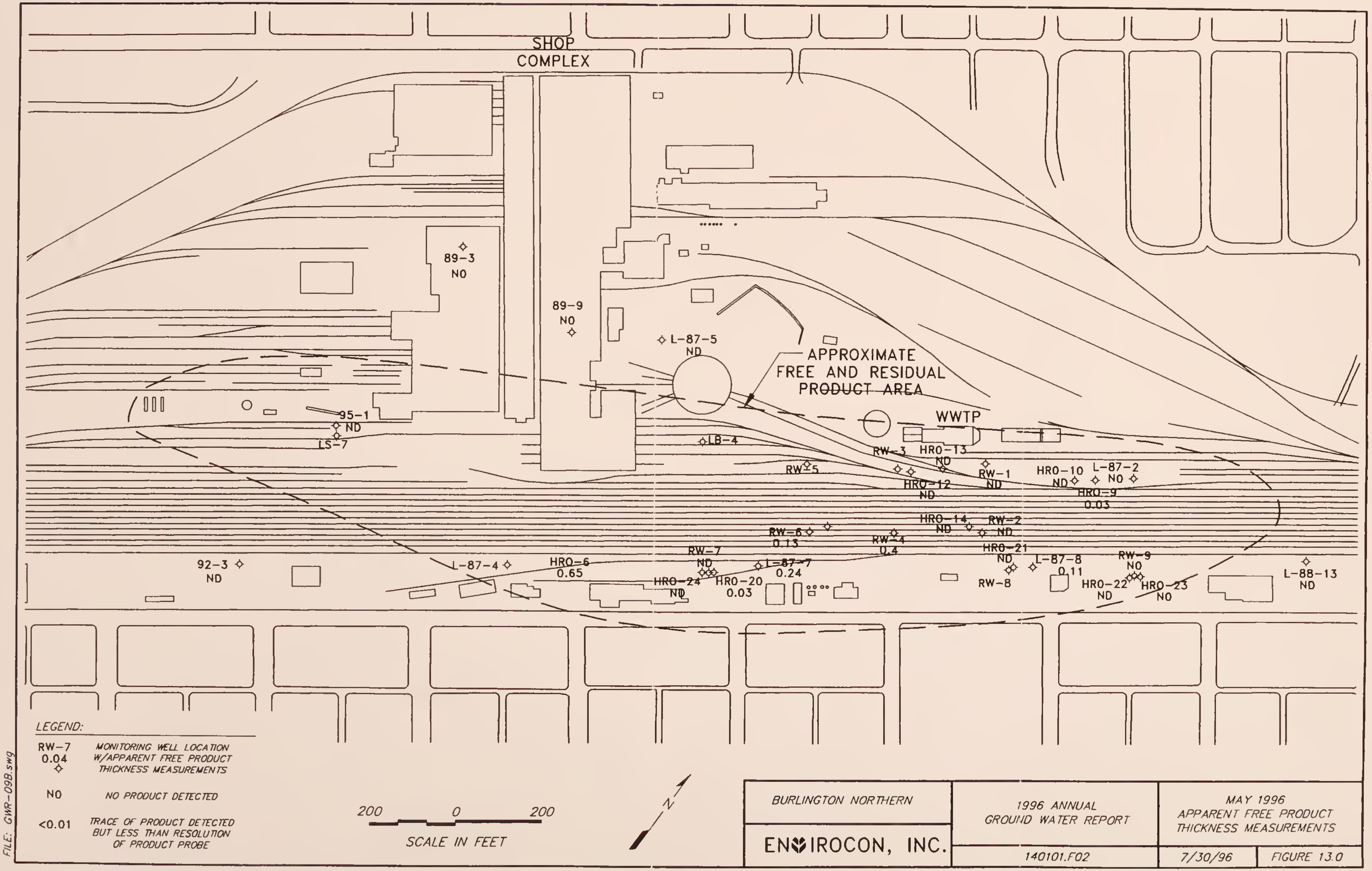
1996 ANNUAL
GROUNDWATER REPORT
LIVINGSTON RAIL YARD
LIVINGSTON, MONTANA

AutoCad FILE: DCELS11.DWG

cis-1,2 DICHLOROETHENE
CONCENTRATIONS
FOR WELL LS-11

9/3/96

FIGURE 12.0



BURLINGTON NORTHERN

ENVIROCON, INC.

1996 ANNUAL
GROUND WATER REPORT

140101.F02

MAY 1996
APPARENT FREE PRODUCT
THICKNESS MEASUREMENTS

7/30/96

FIGURE 13.0

APPENDIX A

LABORATORY ANALYTICAL RESULTS

ENERGY
LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

RECEIVED
SEP 19 1995

September 14, 1995

Michael McKinsey
Envirocon, Inc.
P.O. Box 8243
Missoula, MT 59807

Dear Michael:

On August 23, 1995, these samples, represented by our laboratory numbers 95-52875 through 95-52883 were submitted to our laboratory for analysis.

The test results and quality assurance were reviewed and approved by the undersigned.

Reviewed by: Deborah A Grimm

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 21-AUG-95 19:32
Date Received: 23-AUG-95
Analysis Date: 29-AUG-1995 20:18
File: /chem/IONTRAP2.i/vc082995.b/9552875a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1450 A&B L-87-3

Lab No.: 95-52875
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**9.5**	
trans-1,2-Dichloroethene	**156-60-5**	**<0.50**	**0.24J**
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**69**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**6.1**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.7	107	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 21-AUG-95 19:32
Date Received: 23-AUG-95
Analysis Date: 29-AUG-1995 21:05
File: /chem/IONTRAP2.i/vc082995.b/9552876a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1451 A&B L-87-3 Duplicate

Lab No.: 95-52876
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**9.4**	
trans-1,2-Dichloroethene	**156-60-5**	**<0.50**	**0.24J**
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**67**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**6.1**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 10:28
Date Received: 23-AUG-95
Analysis Date: 29-AUG-1995 22:35
File: /chem/IONTRAP2.i/vc082995.b/9552877a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1452 A&B

Lab No.: 95-52877
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

90-6

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**0.76**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.8	108	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 11:28
Date Received: 23-AUG-95
Analysis Date: 29-AUG-1995 23:21
File: /chem/IONTRAP2.i/vc082995.b/9552878a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1453 A&B 92-1

Lab No.: 95-52878
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**8.6**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**124**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**<0.50**	**0.18J**
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.6	106	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: HJC   Reviewing Supervisor: MFB

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 12:20
Date Received: 23-AUG-95
Analysis Date: 30-AUG-1995 00:51
File: /chem/IONTRAP2.i/vc082995.b/9552879a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1454 A&B

Lab No.: 95-52879
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-5

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.0**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**61**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.5**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 15:04
Date Received: 23-AUG-95
Analysis Date: 30-AUG-1995 01:35
File: /chem/IONTRAP2.i/vc082995.b/9552880a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1455 A&B

Lab No.: 95-52880
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

89-4

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.7**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**103**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.6**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 15:04
Date Received: 23-AUG-95
Analysis Date: 12-SEP-1995 13:27
File: /IONTRAP2.i/vc091295.b/9552880d.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1455 A&B

89-4 Lab Dup.

Lab No.: 95-52880 Duplicate
Report Date: 09/12/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.7**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**103**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.7**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.60	86	80--120
Toluene d8	10.0	9.80	98	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

D= Value derived ftom a 10 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 16:17
Date Received: 23-AUG-95
Analysis Date: 30-AUG-1995 22:05
File: /IONTRAP2.i/vc083095.b/9552881c.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1456 A&B

Lab No.: 95-52881
Report Date: 09/12/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<25	U
Chlorobenzene	**108-90-7**	**34**	
1,2-Dichlorobenzene	95-50-1	<25	U
1,4-Dichlorobenzene	106-46-7	<25	U
1,2-Dichloroethane	107-06-2	<25	U
1,1-Dichloroethene	75-35-4	<25	U
cis-1,2-Dichloroethene	**156-59-2**	**40**	
trans-1,2-Dichloroethene	156-60-5	<25	U
1,2-Dichloropropane	78-87-5	<25	U
Methylene Chloride	75-09-2	<25	U
Tetrachloroethene	127-18-4	<25	U
1,1,1-Trichloroethane	71-55-6	<25	U
1,1,2-Trichloroethane	79-00-5	<25	U
Trichloroethene	79-01-6	<25	U
Vinyl Chloride	**75-01-4**	**43**	
2-Chloroethylvinyl ether	110-75-8	<25	U
Bromodichloromethane	75-27-4	<25	U
Bromoform	75-25-2	<25	U
Chlorodibromomethane	124-48-1	<25	U
Chloroform	67-66-3	<25	U
Bromomethane	74-83-9	<25	U
Chloroethane	75-00-3	<25	U
Chloromethane	74-87-3	<25	U
2-Chlorotoluene	**95-49-8**	**54**	
1,3-Dichlorobenzene	541-73-1	<25	U
Dichlorodifluoromethane	75-71-8	<25	U
1,1-Dichloroethane	75-34-3	<25	U
cis-1,3-Dichloropropene	10061-01-5	<25	U
trans-1,3-Dichloropropene	10061-02-6	<25	U
Fluorotrichloromethane	75-69-4	<25	U
1,1,2,2-Tetrachloroethane	79-34-5	<25	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	500	536	107	80--120
Toluene d8	500	503	101	80--120
p-Bromofluorobenzene	500	492	98	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: Practical quantitation limit reflects a 50 X dilution. The sample was diluted due to foaming sample matrix.

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 16:17
Date Received: 23-AUG-95
Analysis Date: 30-AUG-1995 03:03
File: /chem/IONTRAP2.i/vc082995.b/9552882a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1457 A&B

Lab No.: 95-52882
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-2 Duplicate

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**41**	**D**
1,2-Dichlorobenzene	**95-50-1**	**2.4**	
1,4-Dichlorobenzene	**106-46-7**	**3.0**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**52**	**D**
trans-1,2-Dichloroethene	**156-60-5**	**1.7**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**1.3**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**2.9**	
Vinyl Chloride	**75-01-4**	**26**	**D**
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	**95-49-8**	**64**	**D**
1,3-Dichlorobenzene	**541-73-1**	**<0.50**	**0.43J**
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	9.90	99	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 20 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

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Client: Envirocon, Inc.
Date Sampled: 22-AUG-95 16:18
Date Received: 23-AUG-95
Analysis Date: 30-AUG-1995 04:31
File: /chem/IONTRAP2.i/vc082995.b/9552883a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1458 A&B

Lab No.: 95-52883
Report Date: 09/06/95
Extraction Method: EPA 5030
Sample Matrix: WATER

Equip. Blank

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**<0.50**	**0.20J**
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.46J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	**67-66-3**	**<0.50**	**0.36J**
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

Quality Control Sample: Laboratory Reagent Blank 29-AUG-1995 19:33
Report Date: 09/05/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc082995.b/blk0829b.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.8	108	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 30-AUG-95 10:52
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc083095.b/blk0830a.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.0	100	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.9	109	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

EPA METHOD 624 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 30-AUG-1995 15:16
Lab No.: 95-52881
Report Date: 09/05/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc083095.b/9552881s.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	250	34.0	236	81	60--140
1,1-Dichloroethene	250	<25.0	190	76	60--140
Tetrachloroethene	250	<25.0	171	68	60--140
Trichloroethene	250	<25.0	192	77	60--140

Lab Nos. 95-52875-83

Date 08/23/95

Received by Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain-of-custody form completed & signed	Yes	Comments:
Chain-of-custody seal properly placed	Yes	Comments:
Chain of custody seal intact	Yes	Comments:
Signature Match, Chain-of-custody vs. Seal	Yes	Comments:
Sample received cold	Yes	Comments:
Samples received within holding time	Yes	Comments:
Samples received in proper containers and properly preserved	Yes	Comments:
Client notified about sample discrepancies		Comments:

Who:________ By:________ Date/Time:________

Method of Shipment: Greyhound 122 855 619 7

ENERGY LABORATORIES, INC
P.O. Box 30916 1120 South 27th Street
Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF CUSTODY RECORD

PLEASE PRINT OR TYPE ALL INFORMATION EXCEPT SIGNATURES

P.O. #

Project Name / Address: Livingston Rail Yard

Contact Name & Phone: Michael McKinsey (406) 523-1150

Sampler's signature: Michael McKinsey

Invoice to:
Envirocon
500 Taylor
Missoula, MT 59802

Report to:
Envirocon
500 Taylor
Missoula MT 59802

DATE	TIME	composite	grab sample	SAMPLE I.D.	number of containers / Sample Type: A W S V U O (Air Water Soils/solids Vegetation Urine Other)	Analysis Requested: 601	Comments, Special Instructions, etc.
8/21/95	1932			140101-1450 A, B	2W	X	
"	1932			140101-1451 A, B		X	
8/22/95	1028			140101-1452 A, B		X	
	1128			140101-1453 A, B		X	
	1220			140101-1454 A, B		X	
	1504			140101-1455 A, B		X	
				140101-1456 A, B		X	
				140101-1457 A, B		X	
				140101-1458 A, B		X	

1. Relinquished (signature): Michael McKinsey	Date: 8/22/95	Time: 1700	Received by: (signature)	
2. Relinquished (signature)	Date	Time	Received by: (signature)	
3. Relinquished (signature)	Date	Time	Received by (signature):	
4. Relinquished (signature)	Date: 08/23/95	Time: 1230	Received for laboratory by (signature):	

RECEIVED
SEP 22 1995

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Client: Envirocon, Inc.
Date Sampled: 23-AUG-95 09:26
Date Received: 26-AUG-95
Analysis Date: 06-SEP-1995 05:19
File: /IONTRAP2.i/vc090695.b/9553349a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1459 A,B

Lab No.: 95-53349
Report Date: 09/11/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-88-10

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**7.8**	
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	**106-46-7**	**1.0**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**22**	**D**
trans-1,2-Dichloroethene	**156-60-5**	**<0.50**	**0.39J**
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**29**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**12**	
Vinyl Chloride	**75-01-4**	**0.78**	
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	**95-49-8**	**1.7**	
1,3-Dichlorobenzene	**541-73-1**	**<0.50**	**0.20J**
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times diltion.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 23-AUG-95 10:50
Date Received: 26-AUG-95
Analysis Date: 06-SEP-1995 06:02
File: /IONTRAP2.i/vc090695.b/9553350a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1460 A,B

L-87-8

Lab No.: 95-53350
Report Date: 09/11/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**<0.50**	**0.19J**
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**0.66**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**2.8**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.1**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 23-AUG-95 12:18
Date Received: 26-AUG-95
Analysis Date: 06-SEP-1995 07:28
File: /chem/IONTRAP2.i/vc090695.b/9553351a.d
Project Info: Livingston Rail Yard #5
Sample Info: 140101-1461 A,B

Lab No.: 95-53351
Report Date: 09/15/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**0.59**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ZJC Reviewing Supervisor: WTM

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Client: Envirocon, Inc.	Lab No.: 95-53352
Date Sampled: 23-AUG-95 14:45	Report Date: 09/11/95
Date Received: 26-AUG-95	Extraction Method: EPA 5030
Analysis Date: 06-SEP-1995 08:10	Sample Matrix: WATER

File: /IONTRAP2.i/vc090695.b/9553352a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1462 A,B 92-3

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**0.75**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 23-AUG-95 14:50
Date Received: 26-AUG-95
Analysis Date: 06-SEP-1995 23:57
File: /IONTRAP2.i/vc090695.b/9553353a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1463 A,B

Lab No.: 95-53353
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-3 Duplicate

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**0.57**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.90	99	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	11.0	110	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst:

Reviewing Supervisor:

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 24-AUG-95 11:10
Date Received: 26-AUG-95
Analysis Date: 07-SEP-1995 00:41
File: /IONTRAP2.i/vc090695.b/9553354a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1464 A,B 94-2

Lab No.: 95-53354
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.28J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 24-AUG-95 11:10
Date Received: 26-AUG-95
Analysis Date: 07-SEP-1995 01:25
File: /IONTRAP2.i/vc090695.b/9553355a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1465 A,B

94-2 Duplicate

Lab No.: 95-53355
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.26J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.60	96	80--120
Toluene d8	10.0	9.30	93	80--120
p-Bromofluorobenzene	10.0	11.1	111	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 24-AUG-95 11:25
Date Received: 26-AUG-95
Analysis Date: 07-SEP-1995 02:08
File: /IONTRAP2.i/vc090695.b/9553356a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1466 A,B

Equip. Blank

Lab No.: 95-53356
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	**106-46-7**	**<0.50**	**0.10J**
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	**67-66-3**	**<0.50**	**0.18J**
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.80	98	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.9	109	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 06-SEP-1995 04:36
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc090695.b/blk0906a.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.4	104	80--120
Toluene d8	10.0	10.3	103	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: WTB

Quality Control Sample: Laboratory Reagent Blank 06-SEP-1995 22:28
Report Date: 09/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc090695.b/blk0906ff.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.40	94	80--120
Toluene d8	10.0	9.30	93	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

EPA METHOD 624 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 08-SEP-1995 16:58
Lab No.: 95-53354
Report Date: 09/11/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /IONTRAP2.i/vc090895.b/9553354s.d
Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	5.00	<0.500	4.60	92	60--140
1,1-Dichloroethene	5.00	<0.500	4.90	98	60--140
Tetrachloroethene	5.00	<0.500	4.80	96	60--140
Trichloroethene	5.00	<0.500	4.80	96	60--140

EPA METHOD 624 BLANK SPIKE REPORT

Quality Control Sample: Certified Reference Sample Analysis 06-SEP-1995 01:00
Report Date: 09/11/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc090595.b/qcs0905a.d

Remarks: This certified reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Added	Measured	%Rec	QC Limits
Carbon Tetrachloride	5.00	5.50	110	60--140
Chlorobenzene	5.00	5.00	100	60--140
1,4-Dichlorobenzene	5.00	5.00	100	60--140
1,2-Dichloroethane	5.00	5.20	104	60--140
1,1-Dichloroethene	5.00	4.30	86	60--140
trans-1,2-Dichloroethene	5.00	4.30	86	60--140
1,2-Dichloropropane	5.00	5.00	100	60--140
Tetrachloroethene	5.00	5.20	104	60--140
1,1,2-Trichloroethane	5.00	5.30	106	60--140
1,3-Dichlorobenzene	5.00	5.10	102	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Lab Nos. 95–53349–56

Date: 08/26/95

Received by: J. T. Essex

Logged in by: Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain–of–custody form completed & signed	Yes	Comments:	
Chain–of–custody seal properly placed	Yes	Comments:	
Chain–of–custody seal intact	Yes	Comments:	
Signature Match, Chain–of–custody vs. Seal	Yes	Comments:	
Sample received cold	Yes	Comments:	
Samples received within holding time	Yes	Comments:	
Samples received in proper containers and properly preserved	Yes	Comments:	
Client notified about sample discrepancies		Comments:	

Who: ________ By: ________ Date/Time: ________

Method of Shipment Greyhound 1228556241

ENERGY LABORATORIES, INC
P.O. Box 30916 1120 South 27th Street
Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF CUSTODY RECORD

PLEASE PRINT OR TYPE ALL INFORMATION EXCEPT SIGNATURES

P.O. #

Project Name / Address: Livingston Rail Yard

Contact Name & Phone: Michael McKinsey (406) 523-1150

Sampler's signature: Michael McKinsey

Invoice to:
Envirocon
500 Taylor
Missoula, MT 59802

Report to:
Envirocon
Attn: Mike McKinsey
500 Taylor
Missoula, MT 59802

DATE	TIME	composite	grab sample	SAMPLE I.D.	number of containers	Sample Type: A W S V U O (Air Water Soils/solids Vegetation Urine Other)	Analysis Requested: 601									Comments, Special Instructions, etc.
8/23/95	926			140101-1459 A, B	2	W	X									
↓	1050			140101-1460 A, B	↓		X									
	1218			140101-1461 A, B			X									
	1445			140101-1462 A, B			X									
	1450			140101-1463 A, B			X									
8/24/95	1110			140101-1464 A, B			X									
↓	1110			140101-1465 A, B			X									
	1125			140101-1466 A, B			X									

1. Relinquished (signature) Michael McKinsey	Date 8/25/95	Time 1015	Received by: (signature)	3. Relinquished (signature)	Date	Time	Received by (signature):
2. Relinquished (signature)	Date	Time	Received by: (signature)	4. Relinquished (signature)	Date 08/28/95	Time 1115	Received for laboratory by (signature):

RECEIVED
OCT 0 6 1995

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October 5, 1995

Mike McKinsey
Envirocon, Inc.
P.O. Box 8243
Missoula, MT 59807

On September 8, 1995, these samples, represented by our laboratory numbers 95-54758-67 were submitted to our laboratory for analysis.

The test results and quality assurance were reviewed and approved by the undersigned.

Reviewed by: ____________________

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Client: Envirocon, Inc.
Date Sampled: 05-SEP-95 15:13
Date Received: 08-SEP-95
Analysis Date: 13-SEP-1995 13:09
File: /chem/IONTRAP2.i/vc091395.b/9554758a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1467 A&B 89-2

Lab No.: 95-54758
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.80	98	80--120
Toluene d8	10.0	9.10	91	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 05-SEP-95 16:15
Date Received: 08-SEP-95
Analysis Date: 13-SEP-1995 13:51
File: /chem/IONTRAP2.i/vc091395.b/9554759a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1468 A&B 92-2

Lab No.: 95-54759
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**6.0**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**24**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.0**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	9.80	98	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 05-SEP-95 16:17
Date Received: 08-SEP-95
Analysis Date: 13-SEP-1995 20:34
File: /chem/IONTRAP2.i/vc091395.b/9554760a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1469 A&B 92-2 duplicate

Lab No.: 95-54760
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**6.3**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**25**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.3**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.70	97	80--120
p-Bromofluorobenzene	10.0	11.0	110	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ____

Reviewing Supervisor: ____

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 09:16
Date Received: 08-SEP-95
Analysis Date: 13-SEP-1995 21:20
File: /chem/IONTRAP2.i/vc091395.b/9554761a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101- 1470 A&B

Lab No.: 95-54761
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-4

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**2.1**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.70	97	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.0	100	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 12:05
Date Received: 08-SEP-95
Analysis Date: 13-SEP-1995 22:52
File: /chem/IONTRAP2.i/vc091395.b/9554762a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1471 A&B

Lab No.: 95-54762
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

LS-11

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**45**	**D**
1,2-Dichlorobenzene	**95-50-1**	**0.62**	
1,4-Dichlorobenzene	**106-46-7**	**18**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**19**	
trans-1,2-Dichloroethene	**156-60-5**	**2.2**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**14**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**6.4**	
Vinyl Chloride	**75-01-4**	**0.78**	
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	**541-73-1**	**1.6**	
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.0	100	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 13:10
Date Received: 08-SEP-95
Analysis Date: 16-SEP-1995 13:38
File: /chem/IONTRAP2.i/vc091595.b/9554763b.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1472 A&B

94-1

Lab No.: 95-54763
Report Date: 09/27/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**1.5**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 13:30
Date Received: 08-SEP-95
Analysis Date: 14-SEP-1995 01:57
File: /chem/IONTRAP2.i/vc091395.b/9554764a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1473 A&B

Lab No.: 95-54764
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

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EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.60	96	80--120
Toluene d8	10.0	9.40	94	80--120
p-Bromofluorobenzene	10.0	9.80	98	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 13:30
Date Received: 08-SEP-95
Analysis Date: 26-SEP-95 20:39
File: /chem/IONTRAP2.i/vc092695.b/9554764b.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1473 A&B

Lab No.: 95-54764 Duplicate
Report Date: 09/27/95
Extraction Method: EPA 5030
Sample Matrix: WATER

Equip Blank Lab Dup

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.0	100	80--120
Toluene d8	10.0	9.40	94	80--120
p-Bromofluorobenzene	10.0	10.9	109	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 18:52
Date Received: 08-SEP-95
Analysis Date: 14-SEP-1995 05:42
File: /chem/IONTRAP2.i/vc091495.b/9554765a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1474 A&B

Lab No.: 95-54765
Report Date: 09/18/95
Extraction Method: EPA 5030
Sample Matrix: WATER

89-3

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**186**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**0.73**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.50	95	80--120
Toluene d8	10.0	9.70	97	80--120
p-Bromofluorobenzene	10.0	10.9	109	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
D= Value derived from a 50 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 18:52
Date Received: 08-SEP-95
Analysis Date: 13-SEP-1995 15:23
File: /chem/IONTRAP2.i/vc091395.b/9554766a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1475 A&B

Lab No.: 95-54766
Report Date: 09/14/95
Extraction Method: EPA 5030
Sample Matrix: WATER

89-3 Duplicate

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**194**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**0.72**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.80	98	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
D= Value derived from a 50 times dilution.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

ENERGY LABORATORIES, INC.
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Client: Envirocon, Inc.
Date Sampled: 06-SEP-95 20:13
Date Received: 08-SEP-95
Analysis Date: 14-SEP-1995 07:08
File: /chem/IONTRAP2.i/vc091495.b/9554767a.d
Project Info: Proj. No. 140101, Livingston Rail Yard
Sample Info: 140101-1476 A&B

Lab No.: 95-54767
Report Date: 09/18/95
Extraction Method: EPA 5030
Sample Matrix: WATER

89-9

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.0**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**59**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**2.9**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.20	92	80--120
Toluene d8	10.0	9.60	96	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 13-SEP-1995 11:34
Report Date: 09/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc091395.b/blk0913a.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.40	94	80--120
p-Bromofluorobenzene	10.0	9.80	98	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 13-SEP-1995 19:48
Report Date: 09/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc091395.b/blk0913e.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	9.80	98	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 14-SEP-1995 04:58
Report Date: 09/16/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc091495.b/blk0914b.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.70	97	80--120
Toluene d8	10.0	9.30	93	80--120
p-Bromofluorobenzene	10.0	9.70	97	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

Quality Control Sample: Laboratory Reagent Blank 16-SEP-1995 12:53
Report Date: 09/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc091595.b/blk0916b.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.80	98	80--120
Toluene d8	10.0	9.70	97	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

EPA METHOD 624 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 16-SEP-1995 14:23
Lab No.: 95-54761
Report Date: 09/18/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc091595.b/9554761s.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	5.00	<0.500	4.30	86	60--140
1,1-Dichloroethene	5.00	<0.500	4.90	98	60--140
Tetrachloroethene	5.00	2.1	5.40	66	60--140
Trichloroethene	5.00	<0.500	4.70	94	60--140

Lab Nos. 95-54758-67

Date 09/08/95

Received by Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain-of-custody form completed & signed	Yes	Comments:
Chain-of-custody seal properly placed	Yes	Comments:
Chain-of-custody seal intact	Yes	Comments:
Signature Match, Chain-of-custody vs. Seal	Yes	Comments:
Sample received cold	Yes	Comments:
Samples received within holding time	Yes	Comments:
Samples received in proper containers and properly preserved	Yes	Comments:
Client notified about sample discrepancies		Comments:

Who:________ By:________ Date/Time:________

Method of Shipment UPS

ENERGY LABORATORIES

CHAIN OF CUSTODY RECORD

PROJ. NO. 140101

PROJECT NAME Livingston Rail Yard

SAMPLERS: (Signature) Michael McKinsey

Envirocon
500 Taylor
Missoula, MT 59802

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601	REMARKS
	9/5/95	1513			140101-1467 A,B	2	X	
	9/6/95	1616			140101-1468 A,B	2	X	
	9/5/95	1617			140101-1469 A,B	2	X	
	9/6/95	916			140101-1470 A,B	2	X	
	9/6/95	1205			140101-1471 A,B	2	X	
	9/6/95	1310			140101-1472 A,B	2	X	
	9/6/95				140101-1473 A,B	2	X	
	9/6/95	1852			140101-1474 A,B	2	X	
	9/6/95	1852			140101-1475 A,B	2	X	
	9/6/95	2013			140101-1476 A,B	2	X	

Relinquished (Signature) Michael McKinsey	Date/Time 9/7/95 1604	Received by: (Signature)	Relinguished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinguished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature) Landa Hoelscher	Date/Time 09/08/95 1525	Remarks	

Split Samples:
[] Accepted [] Declined
Signature

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

RECEIVED
JAN 04 1996

January 2, 1996

Michael McKinsey
Envirocon, Inc.
P.O. Box 8243
Missoula, MT 59807

Dear Michael:

On December 1, 1995 these samples, represented by our laboratory numbers 95-70077 through 95-70086 were submitted to our laboratory for analysis.

The test results and quality assurance were reviewed and approved by the undersigned.

Reviewed by: Deborah A. Grimm

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 29-NOV-95 14:22
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 14:57
File: /chem/5971A.i/val20995.b/dec090401004.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1477 94-2

Lab No.: 95-70077
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.43J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.16	92	80--120
Toluene d8	10.0	8.15	82	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 29-NOV-95 15:16
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 15:35
File: /chem/5971A.i/va120995.b/dec090501005.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1478

Lab No.: 95-70078
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**4.1**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**27**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.7**	
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.22	92	80--120
Toluene d8	10.0	8.19	82	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 29-NOV-95 16:40
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 16:53
File: /chem/5971A.i/va120995.b/dec090701007.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1479

Lab No.: 95-70079
Report Date: 12/27/95
Extraction Method: EPA 5030
Sample Matrix: WATER

Equip. Blank

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	**75-09-2**	**0.77**	
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	**67-66-3**	**<0.50**	**0.46J**
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.17	92	80--120
Toluene d8	10.0	8.51	85	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: HJC/WTM Reviewing Supervisor:

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Client: Envirocon, Inc.
Date Sampled: 30-NOV-95 09:53
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 17:32
File: /chem/5971A.i/va120995.b/dec090801008.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1480

Lab No.: 95-70080
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

LS-11

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**59**	**D**
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	**106-46-7**	**17**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**9.0**	
trans-1,2-Dichloroethene	**156-60-5**	**0.83**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**20**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**6.8**	
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	**541-73-1**	**1.5**	
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.22	92	80--120
Toluene d8	10.0	8.12	81	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: WM

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Client: Envirocon, Inc.
Date Sampled: 30-NOV-95 10:52
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 18:50
File: /chem/5971A.i/va120995.b/dec091001010.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1481

Lab No.: 95-70081
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

89-2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.22	92	80--120
Toluene d8	10.0	8.29	83	80--120
p-Bromofluorobenzene	10.0	11.8	118	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: JJC

Reviewing Supervisor: WTB

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Client: Envirocon, Inc.
Date Sampled: 30-NOV-95 11:56
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 20:47
File: /chem/5971A.i/va120995.b/dec091301013.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1483

Lab No.: 95-70083
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-3

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**11**	
trans-1,2-Dichloroethene	**156-60-5**	**0.53**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**89**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**8.8**	
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.80	98	80--120
Toluene d8	10.0	7.98	80	80--120
p-Bromofluorobenzene	10.0	11.4	114	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst:

Reviewing Supervisor:

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Client: Envirocon, Inc.
Date Sampled: 30-NOV-95 14:22
Date Received: 01-DEC-95
Analysis Date: 09-DEC-1995 21:26
File: /chem/5971A.i/va120995.b/dec091401014.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1484

Lab No.: 95-70084
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-88-10

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**15**	
1,2-Dichlorobenzene	**95-50-1**	**1.1**	
1,4-Dichlorobenzene	**106-46-7**	**1.5**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**39**	**D**
trans-1,2-Dichloroethene	**156-60-5**	**0.74**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**40**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**15**	
Vinyl chloride	**75-01-4**	**1.6**	
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	**95-49-8**	**4.8**	
1,3-Dichlorobenzene	**541-73-1**	**<0.50**	**0.35J**
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.4	104	80--120
Toluene d8	10.0	8.28	83	80--120
p-Bromofluorobenzene	10.0	11.8	118	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 30-NOV-95 15:14
Date Received: 01-DEC-95
Analysis Date: 11-DEC-1995 19:01
File: /chem/5971A.i/val21195.b/dec110801008.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1485

Lab No.: 95-70085
Report Date: 12/20/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-8

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.4**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**3.9**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.9**	
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	8.99	90	80--120
p-Bromofluorobenzene	10.0	9.78	98	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
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Client: Envirocon, Inc.
Date Sampled: 30-NOV-95 16:10
Date Received: 01-DEC-95
Analysis Date: 11-DEC-1995 22:17
File: /chem/5971A.i/val21195.b/dec111301013.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1486

Lab No.: 95-70086
Report Date: 12/20/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-3

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.47J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	8.15	82	80--120
p-Bromofluorobenzene	10.0	11.0	110	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

Quality Control Sample: Laboratory Reagent Blank 09-DEC-1995 13:52
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/5971A.i/val20995.b/dec090301003.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.84	88	80--120
Toluene d8	10.0	8.18	82	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: WTM

Quality Control Sample: Laboratory Reagent Blank 11-DEC-1995 14:32
Report Date: 12/20/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/5971A.i/va121195.b/dec110301003.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.44	94	80--120
Toluene d8	10.0	8.23	82	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

EPA METHOD 624 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 21-DEC-1995 18:30
Lab No.: 95-70077
Report Date: 12/22/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vcl22195.b/9570077s.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	5.00	<0.500	5.33	107	60--140
1,1-Dichloroethene	5.00	<0.500	5.62	112	60--140
Trichloroethene	5.00	<0.500	5.72	114	60--140

EPA METHOD 624 BLANK SPIKE REPORT

Quality Control Sample: Certified Reference Sample Analysis 08-DEC-95 15:28
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/5971A.i/val20895.b/dec080701007a.d
Remarks: This certified reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Added	Measured	%Rec	QC Limits
Carbon tetrachloride	5.00	5.69	114	60--140
Chlorobenzene	5.00	5.95	119	60--140
1,4-Dichlorobenzene	5.00	4.64	93	60--140
1,2-Dichloroethane	5.00	5.18	104	60--140
1,1-Dichloroethene	5.00	5.83	117	60--140
trans-1,2-Dichloroethene	5.00	5.51	110	60--140
1,2-Dichloropropane	5.00	4.94	99	60--140
Tetrachloroethene	5.00	5.74	115	60--140
1,1,2-Trichloroethane	5.00	5.22	104	60--140
1,3-Dichlorobenzene	5.00	4.97	99	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	8.06	81	80--120
p-Bromofluorobenzene	10.0	11.1	111	80--120

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

Lab No. 95-70077-86
Date: 12/01/95
Received by: Randa Hoelscher
Logged In by: Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form	Yes	Comments:
Completed & Signed	Yes	Comments:
Chain of Custody Seal	Yes	Comments:
Intact	Yes	Comments:
Signature Match Chain of Custody vs. Seal	Yes	Comments:
Samples Received Cold	Yes	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers and Properly Preserved	Yes	Comments:

Client Notified About Sample Discrepancies

Who: By: Date/Time:

Additional Comments:

Method of Shipment Greyhound Bus 122 855 783 6

ENVIROCON, INC.

CHAIN OF CUSTODY RECORD

PROJ. NO. 140101

PROJECT NAME Livingston Rail Yard

SAMPLERS: (Signature) Michael McKinsey Michael McKinsey

SAMPLED VOLUME	DATE	TIME	COMP.	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	8						REMARKS
2-40ml	11/29/95	1422			140101-1477A,B	2	X						
│	↓	1516			140101-1478A,B	2	X						
		1640			140101-1479A,B	2	X						
	11/30/95	953			140101-1480A,B	2	X						
		1052			140101-1481A,B	2	X						
		1053			140101-1482A,B	2	X						
		1156			140101-1483A,B	2	X						
		1422			140101-1484A,B	2	X						
		1514			140101-1485A,B	2	X						
		1610			140101-1486A,B	2	X						

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Michael McKinsey	11/30/95 1702				
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Chain of Custody Seal:

Intact? ([✓ yes]/no) Intact

Lab Personnel (receiving)

Signature: 12/01/95 @ 1440

Remarks

Split Samples:

☐ Accepted ☐ Declined ____________ Signature

1

ENVIROCON, INC.

CHAIN OF CUSTODY RECORD

PROJ. NO. 140101

PROJECT NAME Livingston Rail Yard

SAMPLERS: (Signature) Michael McKinsey
Michael McKinsey

SAMPLED VOLUME	DATE	TIME	COMP.	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	8010						REMARKS
2-40ml	11/29/95	1422			140101-1477A, B	2	X						
|	↓	1516			140101-1478 A, B	2	X						
		1640			140101-1479 A, B	2	X						
	11/30/95	953			140101-1480 A, B	2	X						
		1052			140101-1481 A, B	2	X						
		1053			140101-1482 A, B	2	X						
		1156			140101-1483 A, B	2	X						
		1422			140101-1484 A, B	2	X						
		1514			140101-1485 A, B	2	X						
		1610			140101-1486 A, B	2	X						

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Michael McKinsey	11/30/95 1702				
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Chain of Custody Seal:

Intact? [✓ yes] no) Intact

Lab Personnel (receiving)

Signature: 12/01/95 @ 1440

Remarks

Split Samples:
☐ Accepted ☐ Declined
Signature

ENERGY LABORATORIES, INC.
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FAX (406) 252-6069 • 1-800-735-4489

RECEIVED
JAN 0 4 1996

January 2, 1996

Michael McKinsey
Envirocon, Inc.
P.O. Box 8243
Missoula, MT 59807

Dear Michael:

On December 5, 1995 these samples, represented by our laboratory numbers 95-70310 through 95-70323 were submitted to our laboratory for analysis.

The test results and quality assurance were reviewed and approved by the undersigned.

Reviewed by: Deborah A Grimm

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 10:28
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 12:14
File: /chem/IONTRAP2.i/vc121495.b/9570310b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1487

Lab No.: 95-70310
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

90-6

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**0.73**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.37	84	80--120
Toluene d8	10.0	9.74	97	80--120
p-Bromofluorobenzene	10.0	11.3	113	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 11:05
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 13:32
File: /chem/IONTRAP2.i/vc121495.b/9570311b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1488

Lab No.: 95-70311
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-5

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.2**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**51**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.0**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.32	93	80--120
Toluene d8	10.0	9.94	99	80--120
p-Bromofluorobenzene	10.0	11.0	110	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

D= Value derived from a 5 times dilution. .

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 11:10
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 14:15
File: /chem/IONTRAP2.i/vc121495.b/9570312b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1489

Lab No.: 95-70312
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-5 Dup.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.2**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**57**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.0**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.37	94	80--120
Toluene d8	10.0	9.80	98	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 11:55
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 15:32
File: /chem/IONTRAP2.i/vc121495.b/9570313b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1490

Lab No.: 95-70313
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

89-4

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**3.1**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**84**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.5**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.89	99	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

D= Value derived from a 25 times dilution.

REPORT COMMENTS: None

Analyst:

Reviewing Supervisor:

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 12:54
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 17:33
File: /chem/IONTRAP2.i/vc121495.b/9570314b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1491

Lab No.: 95-70314
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

#6

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**1.2**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.9	109	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	10.9	109	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 15:03
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 18:17
File: /chem/IONTRAP2.i/vc121495.b/9570315b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1492

Lab No.: 95-70315
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

#5

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**0.63**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.9	109	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 01-DEC-95 16:36
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 20:27
File: /chem/IONTRAP2.i/vc121495.b/9570316b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1493

Lab No.: 95-70316
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

L-87-2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**45**	**D**
1,2-Dichlorobenzene	**95-50-1**	**2.0**	
1,4-Dichlorobenzene	**106-46-7**	**3.2**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**88**	**D**
trans-1,2-Dichloroethene	**156-60-5**	**2.0**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**1.8**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**3.7**	
Vinyl Chloride	**75-01-4**	**35**	**D**
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	**95-49-8**	**58**	**D**
1,3-Dichlorobenzene	**541-73-1**	**<0.50**	**0.44J**
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	9.87	99	80--120
p-Bromofluorobenzene	10.0	9.22	92	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 25 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

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Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 10:50
Date Received: 05-DEC-95
Analysis Date: 14-DEC-1995 19:43
File: /chem/IONTRAP2.i/vcl21495.b/9570317b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1494

Lab No.: 95-70317
Report Date: 12/19/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-1

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**12**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**109**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**<0.50**	**0.30J**
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.7	107	80--120
Toluene d8	10.0	9.96	100	80--120
p-Bromofluorobenzene	10.0	9.97	100	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 12:12
Date Received: 05-DEC-95
Analysis Date: 15-DEC-1995 11:10
File: /chem/IONTRAP2.i/vc121595.b/9570318a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1495

Lab No.: 95-70318
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

89-9

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**1.1**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**62**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**2.7**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.07	91	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	11.7	117	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ____ Reviewing Supervisor: ____

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Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 13:52
Date Received: 05-DEC-95
Analysis Date: 15-DEC-1995 11:52
File: /chem/IONTRAP2.i/vc121595.b/9570319a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1496

Lab No.: 95-70319
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER

89-3

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**199**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**0.59**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.65	97	80--120
Toluene d8	10.0	9.77	98	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
D= Value derived from a 25 times dilution.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 15:25
Date Received: 05-DEC-95
Analysis Date: 15-DEC-1995 13:18
File: /chem/IONTRAP2.i/vc121595.b/9570320a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1497

Lab No.: 95-70320
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER

94-1

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**2.4**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.04	90	80--120
Toluene d8	10.0	9.91	99	80--120
p-Bromofluorobenzene	10.0	11.4	114	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 15:25
Date Received: 05-DEC-95
Analysis Date: 20-DEC-1995 18:52
File: /chem/IONTRAP2.i/vc122095.b/9570320b.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1497

Lab No.: 95-70320 Duplicate
Report Date: 12/26/95
Extraction Method: EPA 5030
Sample Matrix: WATER

94-1 Lab Dup
~~92-1~~

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**1.7**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 16:45
Date Received: 05-DEC-95
Analysis Date: 15-DEC-1995 14:00
File: /chem/IONTRAP2.i/vc121595.b/9570321a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1498

Lab No.: 95-70321
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-4

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**<0.50**	**0.12J**
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**4.4**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.0**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODES EXPLANATION:
U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 02-DEC-95 16:50
Date Received: 05-DEC-95
Analysis Date: 15-DEC-1995 14:43
File: /chem/IONTRAP2.i/vc121595.b/9570322a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1499

Lab No.: 95-70322
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER

92-4
Field Dup.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**<0.50**	**0.12J**
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**4.5**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**1.1**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.7	107	80--120
Toluene d8	10.0	9.86	99	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ____ Reviewing Supervisor: ____

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 03-DEC-95 10:45
Date Received: 05-DEC-95
Analysis Date: 15-DEC-1995 15:22
File: /chem/IONTRAP2.i/vc121595.b/9570323a.d
Project Info: Livingston Rail Yard
Sample Info: 140101-1500

Lab No.: 95-70323
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER

#1

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.48J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.7	107	80--120
Toluene d8	10.0	9.77	98	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

Quality Control Sample: Laboratory Reagent Blank 14-DEC-1995 10:48
Report Date: 12/26/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vcl21495.b/blkl214c.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.72	87	80--120
Toluene d8	10.0	9.74	97	80--120
p-Bromofluorobenzene	10.0	11.2	112	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 15-DEC-1995 10:30
Report Date: 12/21/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc121595.b/blk1215aa.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.39	94	80--120
Toluene d8	10.0	9.81	98	80--120
p-Bromofluorobenzene	10.0	10.9	109	80--120

QUALIFIER CODES EXPLANATION:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

EPA METHOD 624 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 20-DEC-1995 19:34
Lab No.: 95-70321
Report Date: 12/26/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc122095.b/9570321s.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	5.00	<0.500	5.12	102	60--140
1,1-Dichloroethene	5.00	<0.500	5.10	102	60--140
Trichloroethene	5.00	1.00	6.46	109	60--140

EPA METHOD 624 BLANK SPIKE REPORT

Quality Control Sample: Certified Reference Sample Analysis 13-DEC-95 11:17
Report Date: 12/13/95
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vcl21395.b/qcsl213a.d

Remarks: This certified reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	**Added**	**Measured**	**%Rec**	**QC Limits**
Carbon Tetrachloride	5.00	5.44	109	60--140
Chlorobenzene	5.00	5.08	102	60--140
1,4-Dichlorobenzene	5.00	5.36	107	60--140
1,2-Dichloroethane	5.00	5.45	109	60--140
1,1-Dichloroethene	5.00	5.18	104	60--140
trans-1,2-Dichloroethene	5.00	5.26	105	60--140
1,2-Dichloropropane	5.00	5.05	101	60--140
Tetrachloroethene	5.00	5.36	107	60--140
1,1,2-Trichloroethane	5.00	5.50	110	60--140
1,3-Dichlorobenzene	5.00	5.15	103	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.88	99	80--120
p-Bromofluorobenzene	10.0	9.97	100	80--120

REPORT COMMENTS: None

Analyst:________ Reviewing Supervisor:________

Lab No. 95-70077-86

Date: 12/01/95

Received by: Randa Hoelscher

Logged In by: Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form	Yes	Comments:
Completed & Signed	Yes	Comments:
Chain of Custody Seal	Yes	Comments:
Intact	Yes	Comments:
Signature Match Chain of Custody vs. Seal	Yes	Comments:
Samples Received Cold	Yes	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers and Properly Preserved	Yes	Comments:

Client Notified About Sample Discrepancies

Who: By: Date/Time:

Additional Comments:

Method of Shipment Greyhound Bus 122 855 783 6

ENVIROCON, INC.

CHAIN OF CUSTODY RECORD

PROJ. NO. 140101

PROJECT NAME Livingston Rail Yard

SAMPLERS: (Signature) Michael McKinsey
Michael McKinsey

SAMPLED VOLUME	DATE	TIME	COMP.	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	8					REMARKS
2-40ml	11/29/95	1422			140101-1477A,B	2	X					
|	↓	1516			140101-1478A,B	2	X					
		1640			140101-1479A,B	2	X					
	11/30/95	953			140101-1480A,B	2	X					
		1052			140101-1481A,B	2	X					
		1053			140101-1482A,B	2	X					
		1156			140101-1483A,B	2	X					
		1422			140101-1484A,B	2	X					
		1514			140101-1485A,B	2	X					
		1610			140101-1486A,B	2	X					

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Michael McKinsey	11/30/95 1702				
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Chain of Custody Seal:

Intact? [✓ yes] no) Intact

Lab Personnel (receiving)

Signature: 12/01/95 @ 1440

Remarks

Split Samples:

ENVIROCON, INC.

CHAIN OF CUSTODY RECORD

PROJ. NO. 140101

PROJECT NAME Livingston Rail Yard

SAMPLERS: (Signature) Michael McKinzey

Envirocon
500 Taylor
Missoula, MT 59802

(406) 523-1150

SAMPLED VOLUME	DATE	TIME	COMP.	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	601							REMARKS
2 - 40ml	12/1/95	1028			140101 - 1487 A, B	2	X							
		1105			〃 - 1488 A, B	2	X							
		1110			- 1489 A, B	2	X							
		1155			- 1490 A, B	2	X							
		1254			- 1491 A, B	2	X							
		1503			- 1492 A, B	2	X							
		1636			- 1493 A, B	2	X							
	12/2/95	1050			- 1494 A, B	2	X							
		1212			- 1495 A, B	2	X							
		1352			- 1496 A, B	2	X							
		1525			- 1497 A, B	2	X							
		1645			- 1498 A, B	2	X							
	12/2 mw ~~12/3/95~~	mw ~~1045~~	1650		- 1499 A, B	2	X							
	12/3/95	1045			- 1500 A, B	2	X							

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Michael McKinzey	12/4/95 955				

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Chain of Custody Seal:

Intact? [✓ yes]/no) Intact

Lab Personnel (receiving)

Signature: Lynda Hoelscher

12/05/96 @ 1530

Remarks

Split Samples:
☐ Accepted ☐ Declined

Signature

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

RECEIVED
JUN 06 1996

June 5, 1996

Michael McKinsey
Envirocon, Inc.
P.O. Box 8243
Missoula, MT 59807

On May 22, 1996, these samples, represented by our laboratory numbers 96-32789 through 96-32796, were submitted to our laboratory for analysis.

The test results and quality assurance were reviewed and approved by the undersigned.

Reviewed by: Deborah A Grimm

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Client: Envirocon, Inc.
Date Sampled: 20-MAY-96 15:16
Date Received: 22-MAY-96
Analysis Date: 24-MAY-1996 09:57
File: /chem/IONTRAP2.i/vc052396.b/9632789a.d
Project Info: LRY
Sample Info: 140101-1501 89-2

Lab No.: 96-32789
Report Date: 06/03/96 13:56
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.56	96	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 20-MAY-96 16:14
Date Received: 22-MAY-96
Analysis Date: 24-MAY-1996 10:39
File: /chem/IONTRAP2.i/vc052396.b/9632790a.d
Project Info: LRY
Sample Info: 140101-1502 L-87-2

Lab No.: 96-32790
Report Date: 06/03/96 13:56
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**22**	**D**
1,2-Dichlorobenzene	**95-50-1**	**1.7**	
1,4-Dichlorobenzene	**106-46-7**	**2.4**	
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**23**	**D**
trans-1,2-Dichloroethene	**156-60-5**	**1.2**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**14**	
Vinyl Chloride	**75-01-4**	**16**	**D**
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	**95-49-8**	**46**	**D**
1,3-Dichlorobenzene	**541-73-1**	**<0.50**	**0.35J**
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

----------------- SURROGATE RECOVERY REPORT -----------------

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.80	98	80--120
p-Bromofluorobenzene	10.0	9.87	99	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
D= Value was derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 20-MAY-96 17:15
Date Received: 22-MAY-96
Analysis Date: 31-MAY-1996 11:14
File: /chem/IONTRAP2.i/vc053196.b/9632791c.d
Project Info: LRY
Sample Info: 140101-1503 L-87-4

Lab No.: 96-32791
Report Date: 06/03/96 14:48
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.10	81	80--120
Toluene d8	10.0	9.35	94	80--120
p-Bromofluorobenzene	10.0	11.6	116	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 21-MAY-96 08:20
Date Received: 22-MAY-96
Analysis Date: 24-MAY-1996 12:02
File: /chem/IONTRAP2.i/vc052396.b/9632792a.d
Project Info: LRY
Sample Info: 140101-1504 B-Street

Lab No.: 96-32792
Report Date: 06/03/96 13:57
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	8.96	90	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 21-MAY-96 08:20
Date Received: 22-MAY-96
Analysis Date: 24-MAY-1996 12:02
File: /chem/IONTRAP2.i/vc052396.b/9632792a.d
Project Info: LRY
Sample Info: 140101-1504 B-Street

Lab No.: 96-32792
Report Date: 06/03/96 13:57
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	8.96	90	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: TJC Reviewing Supervisor: WB

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Client: Envirocon, Inc.
Date Sampled: 21-MAY-96 12:06
Date Received: 22-MAY-96
Analysis Date: 29-MAY-1996 21:03
File: /chem/IONTRAP2.i/vc052996.b/9632793a.d
Project Info: LRY
Sample Info: 140101-1505 L-87-8

Lab No.: 96-32793
Report Date: 06/03/96 14:19
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**0.55**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**2.4**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**2.2**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	9.91	99	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: WB

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Client: Envirocon, Inc.
Date Sampled: 21-MAY-96 13:15
Date Received: 22-MAY-96
Analysis Date: 30-MAY-1996 01:16
File: /chem/IONTRAP2.i/vc052996.b/9632794a.d
Project Info: LRY
Sample Info: 140101-1506 94-2

Lab No.: 96-32794
Report Date: 06/03/96 14:19
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.25J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	9.86	99	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 21-MAY-96 13:20
Date Received: 22-MAY-96
Analysis Date: 30-MAY-1996 02:03
File: /chem/IONTRAP2.i/vc052996.b/9632795a.d
Project Info: LRY
Sample Info: 140101-1507 94-2 Field Dup

Lab No.: 96-32795
Report Date: 06/03/96 14:19
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.25J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74 83-9	<0.50	U
Chloroethane	75 00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.4	104	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

Quality Control Sample: Laboratory Reagent Blank 24-MAY-1996 03:36
Report Date: 06/03/96 13:56
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc052396.b/blk0524a.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	9.52	95	80--120
p-Bromofluorobenzene	10.0	11.3	113	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 21-MAY-96 16:00
Date Received: 22-MAY-96
Analysis Date: 30-MAY-1996 03:37
File: /chem/IONTRAP2.i/vc052996.b/9632796a.d
Project Info: LRY
Sample Info: 140101-1508 94-1

Lab No.: 96-32796
Report Date: 06/03/96 14:19
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**1.8**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.71	97	80--120
Toluene d8	10.0	9.61	96	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ____________ Reviewing Supervisor: ____________

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Quality Control Sample: Laboratory Reagent Blank 24-MAY-1996 03:36
Report Date: 06/03/96 13:56
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc052396.b/blk0524a.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	9.52	95	80--120
p-Bromofluorobenzene	10.0	11.3	113	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

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Quality Control Sample: Laboratory Reagent Blank 30-MAY-1996 00:26
Report Date: 06/03/96 14:19
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc052996.b/blk0530a.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.86	99	80--120
Toluene d8	10.0	9.59	96	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ____ Reviewing Supervisor: ____

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Quality Control Sample: Laboratory Reagent Blank 31-MAY-1996 10:03
Report Date: 06/03/96 14:53
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc053196.b/blk0531a.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.69	97	80--120
Toluene d8	10.0	9.70	97	80--120
p-Bromofluorobenzene	10.0	11.2	112	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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EPA METHOD 524.2 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 31-MAY-1996 13:57
Lab No.: 96-32792
Report Date: 06/03/96 14:49
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc053196.b/9632792s.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	5.00	<0.500	4.64	93	60--140
1,1-Dichloroethene	5.00	<0.500	4.39	88	60--140
Trichloroethene	5.00	<0.500	5.02	100	60--140

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

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EPA METHOD 624 BLANK SPIKE REPORT

Quality Control Sample: Certified Reference Sample Analysis 23-MAY-1996 17:24
Report Date: 06/03/96 14:07
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc052396.b/qcs0523a.d

Remarks: This certified reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	**Added**	**Measured**	**%Rec**	**QC Limits**
Carbon Tetrachloride	5.00	5.03	101	60--140
Chlorobenzene	5.00	4.33	87	60--140
1,4-Dichlorobenzene	5.00	5.08	102	60--140
1,2-Dichloroethane	5.00	4.96	99	60--140
1,1-Dichloroethene	5.00	5.61	112	60--140
trans-1,2-Dichloroethene	5.00	5.22	104	60--140
1,2-Dichloropropane	5.00	4.95	99	60--140
Tetrachloroethene	5.00	4.88	98	60--140
1,1,2-Trichloroethane	5.00	4.69	94	60--140
1,3-Dichlorobenzene	5.00	5.16	103	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.60	96	80--120
Toluene d8	10.0	9.78	98	80--120
p-Bromofluorobenzene	10.0	11.0	110	80--120

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Lab Nos.: 96-32789 - 96-32796
Date: 22-MAY-96
Received by: Pam Fink
Logged In by: Pam Fink

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form Completed & Signed	Yes	Comments:
Chain of Custody Seal	Yes	Comments:
Intact	Yes	Comments:
Signature Match Chain of Custody vs. Seal	Yes	Comments:
Samples Received Cold	Yes	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers	Yes	Comments:
Samples Received Properly Preserved	N/A	Comments:

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis. Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: By: Date/Time:

Method of Shipping: Greyhound 1303590904

Additional comments:

ENERGY LABORATORIES, INC
P.O. Box 30916 1120 South 27th Street
Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF COUSTODY RECORD

PLEASE PRINT OR TYPE ALL INFORMATION EXCEPT SIGNATURES

P.O. #

Project Name / Address: LRY

Contact Name & Phone: Michael McKinsey (406) 523-1150

Sampler's signature: Michael McKinsey

Invoice to:
Envirocon
500 Taylor
Missoula, MT 59802

Report to:

DATE	TIME	composite	grab sample	SAMPLE I.D.	number of containers / Sample Type: A W S V U O (Air Water Soils/solids Vegetation Urine Other)	Analysis Requested: 601									Comments, Special Instructions, etc.
5/20/96	1516			140101- 1501 A,B	2 W	X									
↓				↓ - 1502 A,B	↓	X									
	1715			1503 A,B		X									
				1504 A,B		X									bottle sample date 05/21/96
5/21/96	1206			1505 A,B		X									
↓	1315			1506 A,B		X									
	1320			1507 A,B		X									
	1600			1508 A,B		X									

1. Relinquished (signature)	Date	Time	Received by: (signature)	3. Relinquished (signature)	Date	Time	Received by (signature):
Michael McKinsey	5/21/96	1643					
2. Relinquished (signature)	**Date**	**Time**	**Received by: (signature)**	**4. Relinquished (signature)**	**Date**	**Time**	**Received for laboratory by (signature):**
					05/22/96	1340	Pam Fink

JUN 26 1996

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32989
Date : 6/24/96

GENERAL INFORMATION:
Laboratory No. : 96-32989
Sample Type : WATER
Sample Point : 140101-1509 Well 92-2
Sample Date : 5/21/96
Sample Time : 1757
Sample Received : 5/23/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	5/30/96
Chlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloroethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(µg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(µg/l)	0.74		5/30/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloropropane	(µg/l)	<0.50	U	5/30/96
Methylene Chloride	(µg/l)	<0.50	U	5/30/96
Tetrachloroethene	(µg/l)	9.7		5/30/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	5/30/96
Trichloroethene	(µg/l)	0.67		5/30/96
Vinyl Chloride	(µg/l)	<0.50	U	5/30/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	5/30/96
Bromodichloromethane	(µg/l)	<0.50	U	5/30/96
Bromoform	(µg/l)	<0.50	U	5/30/96
Bromomethane	(µg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(µg/l)	<0.50	U	5/30/96
Chloroform	(µg/l)	<0.50	U	5/30/96
Chloroethane	(µg/l)	<0.50	U	5/30/96
Chloromethane	(µg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(µg/l)	<0.50	U	5/30/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(µg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(µg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	5/30/96

U Indicates compound was analyzed for but not detected.

Lab No. 96-32989

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.71	97	80--120
Toluene d8	10.0	9.35	94	80--120
p-Bromofluorobenzene	10.0	11.1	111	80--120

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32990
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-32990
Sample Type : WATER
Sample Point : 140101-1510 L-88-10
Sample Date : 5/21/96
Sample Time : 1848
Sample Received : 5/23/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	5/30/96
Chlorobenzene	(µg/l)	5.4		5/30/96
1,2-Dichlorobenzene	(µg/l)	0.57		5/30/96
1,4-Dichlorobenzene	(µg/l)	0.80		5/30/96
1,2-Dichloroethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(µg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(µg/l)	16	D	5/30/96
trans-1,2-Dichloroethene	(µg/l)	1.2		5/30/96
1,2-Dichloropropane	(µg/l)	<0.50	U	5/30/96
Methylene Chloride	(µg/l)	<0.50	U	5/30/96
Tetrachloroethene	(µg/l)	30	D	5/30/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	5/30/96
Trichloroethene	(µg/l)	11		5/30/96
Vinyl Chloride	(µg/l)	0.87		5/30/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	5/30/96
Bromodichloromethane	(µg/l)	<0.50	U	5/30/96
Bromoform	(µg/l)	<0.50	U	5/30/96
Bromomethane	(µg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(µg/l)	<0.50	U	5/30/96
Chloroform	(µg/l)	<0.50	U	5/30/96
Chloroethane	(µg/l)	<0.50	U	5/30/96
Chloromethane	(µg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(µg/l)	0.84		5/30/96
1,3-Dichlorobenzene	(µg/l)	<0.50(0.13)	J	5/30/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(µg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(µg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	5/30/96

D Value was derived from a 10 times dilution.
J Estimated value. Present, but less than the limit of quantitation.
U Indicates compound was analyzed for but not detected.

Lab No. 96-32990

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.24	92	80--120
Toluene d8	10.0	8.99	90	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

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LABORATORY REPORT

Page: 1

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32991
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-32991
Sample Type : WATER
Sample Point : 140101-1511 L-88-13
Sample Date : 5/21/96
Sample Time : 1924
Sample Received : 5/23/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(μg/l)	<0.50	U	5/30/96
Chlorobenzene	(μg/l)	<0.50	U	5/30/96
1,2-Dichlorobenzene	(μg/l)	<0.50	U	5/30/96
1,4-Dichlorobenzene	(μg/l)	<0.50	U	5/30/96
1,2-Dichloroethane	(μg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(μg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(μg/l)	0.68		5/30/96
trans-1,2-Dichloroethene	(μg/l)	<0.50	U	5/30/96
1,2-Dichloropropane	(μg/l)	<0.50	U	5/30/96
Methylene Chloride	(μg/l)	<0.50	U	5/30/96
Tetrachloroethene	(μg/l)	16		5/30/96
1,1,1-Trichloroethane	(μg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(μg/l)	<0.50	U	5/30/96
Trichloroethene	(μg/l)	2.5		5/30/96
Vinyl Chloride	(μg/l)	<0.50	U	5/30/96
2-Chloroethylvinyl ether	(μg/l)	<0.50	U	5/30/96
Bromodichloromethane	(μg/l)	<0.50	U	5/30/96
Bromoform	(μg/l)	<0.50	U	5/30/96
Bromomethane	(μg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(μg/l)	<0.50	U	5/30/96
Chloroform	(μg/l)	<0.50	U	5/30/96
Chloroethane	(μg/l)	<0.50	U	5/30/96
Chloromethane	(μg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(μg/l)	<0.50	U	5/30/96
1,3-Dichlorobenzene	(μg/l)	<0.50	U	5/30/96
Dichlorodifluoromethane	(μg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(μg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(μg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(μg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(μg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(μg/l)	<0.50	U	5/30/96

U Indicates compound was analyzed for but not detected.

Lab No. 96-32991

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added μg/L	Amount Measured μg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.48	95	80--120
Toluene d8	10.0	9.49	95	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32992
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-32992
Sample Type : WATER
Sample Point : 140101-1512 89-4
Sample Date : 5/22/96
Sample Time : 1459
Sample Received : 5/23/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	5/30/96
Chlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloroethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(µg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(µg/l)	2.9		5/30/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloropropane	(µg/l)	<0.50	U	5/30/96
Methylene Chloride	(µg/l)	<0.50	U	5/30/96
Tetrachloroethene	(µg/l)	137	D	5/30/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	5/30/96
Trichloroethene	(µg/l)	1.2		5/30/96
Vinyl Chloride	(µg/l)	<0.50	U	5/30/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	5/30/96
Bromodichloromethane	(µg/l)	<0.50	U	5/30/96
Bromoform	(µg/l)	<0.50	U	5/30/96
Bromomethane	(µg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(µg/l)	<0.50	U	5/30/96
Chloroform	(µg/l)	<0.50	U	5/30/96
Chloroethane	(µg/l)	<0.50	U	5/30/96
Chloromethane	(µg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(µg/l)	<0.50	U	5/30/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(µg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(µg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	5/30/96

D	Value was derived from a 10 times dilution.
U	Indicates compound was analyzed for but not detected.

Lab No. 96-32992

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.33	93	80--120
Toluene d8	10.0	9.44	94	80--120
p-Bromofluorobenzene	10.0	11.4	114	80--120

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32993
Date : 6/24/96

GENERAL INFORMATION:
Laboratory No. : 96-32993
Sample Type : WATER
Sample Point : 140101-1513 92-4
Sample Date : 5/22/96
Sample Time : 1528
Sample Received : 5/23/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	5/30/96
Chlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloroethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(µg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(µg/l)	0.81		5/30/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloropropane	(µg/l)	<0.50	U	5/30/96
Methylene Chloride	(µg/l)	<0.50	U	5/30/96
Tetrachloroethene	(µg/l)	28	D	5/30/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	5/30/96
Trichloroethene	(µg/l)	1.4		5/30/96
Vinyl Chloride	(µg/l)	<0.50	U	5/30/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	5/30/96
Bromodichloromethane	(µg/l)	<0.50	U	5/30/96
Bromoform	(µg/l)	<0.50	U	5/30/96
Bromomethane	(µg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(µg/l)	<0.50	U	5/30/96
Chloroform	(µg/l)	<0.50	U	5/30/96
Chloroethane	(µg/l)	<0.50	U	5/30/96
Chloromethane	(µg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(µg/l)	<0.50	U	5/30/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(µg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(µg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	5/30/96

D Value was derived from a 10 times dilution.
U Indicates compound was analyzed for but not detected.

Lab No. 96-32993

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added μg/L	Amount Measured μg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.64	96	80--120
Toluene d8	10.0	9.73	97	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32994
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-32994
Sample Type : WATER
Sample Point : 140101-1514 #6
Sample Date : 5/22/96
Sample Time : 1621
Sample Received : 5/23/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	5/30/96
Chlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloroethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(µg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(µg/l)	<0.50	U	5/30/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	5/30/96
1,2-Dichloropropane	(µg/l)	<0.50	U	5/30/96
Methylene Chloride	(µg/l)	<0.50	U	5/30/96
Tetrachloroethene	(µg/l)	1.4		5/30/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	5/30/96
Trichloroethene	(µg/l)	<0.50	U	5/30/96
Vinyl Chloride	(µg/l)	<0.50	U	5/30/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	5/30/96
Bromodichloromethane	(µg/l)	<0.50	U	5/30/96
Bromoform	(µg/l)	<0.50	U	5/30/96
Bromomethane	(µg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(µg/l)	<0.50	U	5/30/96
Chloroform	(µg/l)	<0.50	U	5/30/96
Chloroethane	(µg/l)	<0.50	U	5/30/96
Chloromethane	(µg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(µg/l)	<0.50	U	5/30/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	5/30/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(µg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(µg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	5/30/96

U Indicates compound was analyzed for but not detected.

Lab No. 96-32994

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	9.14	91	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-32995
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-32995
Sample Type : WATER
Sample Point : 140101-1515
Sample Date : 5/22/96
Sample Time : 1623
Sample Received : 5/23/96

#6 Field dup.

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(μg/l)	<0.50	U	5/30/96
Chlorobenzene	(μg/l)	<0.50	U	5/30/96
1,2-Dichlorobenzene	(μg/l)	<0.50	U	5/30/96
1,4-Dichlorobenzene	(μg/l)	<0.50	U	5/30/96
1,2-Dichloroethane	(μg/l)	<0.50	U	5/30/96
1,1-Dichloroethene	(μg/l)	<0.50	U	5/30/96
cis-1,2-Dichloroethene	(μg/l)	<0.50	U	5/30/96
trans-1,2-Dichloroethene	(μg/l)	<0.50	U	5/30/96
1,2-Dichloropropane	(μg/l)	<0.50	U	5/30/96
Methylene Chloride	(μg/l)	<0.50	U	5/30/96
Tetrachloroethene	(μg/l)	1.5		5/30/96
1,1,1-Trichloroethane	(μg/l)	<0.50	U	5/30/96
1,1,2-Trichloroethane	(μg/l)	<0.50	U	5/30/96
Trichloroethene	(μg/l)	<0.50	U	5/30/96
Vinyl Chloride	(μg/l)	<0.50	U	5/30/96
2-Chloroethylvinyl ether	(μg/l)	<0.50	U	5/30/96
Bromodichloromethane	(μg/l)	<0.50	U	5/30/96
Bromoform	(μg/l)	<0.50	U	5/30/96
Bromomethane	(μg/l)	<0.50	U	5/30/96
Chlorodibromomethane	(μg/l)	<0.50	U	5/30/96
Chloroform	(μg/l)	<0.50	U	5/30/96
Chloroethane	(μg/l)	<0.50	U	5/30/96
Chloromethane	(μg/l)	<0.50	U	5/30/96
2-Chlorotoluene	(μg/l)	<0.50	U	5/30/96
1,3-Dichlorobenzene	(μg/l)	<0.50	U	5/30/96
Dichlorodifluoromethane	(μg/l)	<0.50	U	5/30/96
1,1-Dichloroethane	(μg/l)	<0.50	U	5/30/96
cis-1,3-Dichloropropene	(μg/l)	<0.50	U	5/30/96
trans-1,3-Dichloropropene	(μg/l)	<0.50	U	5/30/96
Fluorotrichloromethane	(μg/l)	<0.50	U	5/30/96
1,1,2,2-Tetrachloroethane	(μg/l)	<0.50	U	5/30/96

U Indicates compound was analyzed for but not detected.

Lab No. 96-32995

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added μg/L	Amount Measured μg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	9.31	93	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

Quality Control Sample: Laboratory Reagent Blank 30-MAY-1996 00:26
Report Date: 06/03/96 14:19
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc052996.b/blk0530a.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.86	99	80--120
Toluene d8	10.0	9.59	96	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: MB

Quality Control Sample: Laboratory Reagent Blank 30-MAY-1996 13:33
Report Date: 06/07/96 14:47
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc053096.b/blk0530e.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	9.76	98	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:
U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

```
                    EPA METHOD 624 MATRIX SPIKE REPORT
                    ==================================
Quality Control Sample: Matrix Spike Analysis 03-JUN-96 19:42
Lab No.: 96-32991
Report Date: 06/04/96   09:06
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060396.b/9632991s.d
Remarks: These compounds were spiked into the sample matrix to determine if the
sample matrix contributes bias to the analytical results and to monitor the accuracy
of the methodology.
                                      CONCENTRATION UNITS = ug/L (ppb)
                                  Spike  Sample        Matrix Spike  MS
 Spike Compound                   Added  Concentration Concentration %Rec  QC Limits
 ===============                  =====  ============= ============= ===== =========
 Chlorobenzene                    5.00          <0.500          4.84    97   60--140
 1,1-Dichloroethene               5.00          <0.500          4.79    96   60--140
 Trichloroethene                  5.00           2.500          8.18   114   60--140
```

Lab Nos.: 96-32989 - 96-32995

Date: 23-MAY-96

Received by: Darcy Anderson

Logged In by: Darcy Anderson

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form Completed & Signed	Yes	Comments:
Chain of Custody Seal	No	Comments:
Intact	N/A	Comments:
Signature Match Chain of Custody vs. Seal	N/A	Comments:
Samples Received Cold	Yes	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers	Yes	Comments:
Samples Received Properly Preserved	Yes	Comments:

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis. Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: By: Date/Time:

Method of Shipping: Greyhound 130 359 091 5

Additional comments:

ENERGY LABORATORIES, INC
P.O. Box 30916 1120 South 27th Street
Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF CUSTODY RECORD

PLEASE PRINT OR TYPE ALL INFORMATION EXCEPT SIGNATURES

P.O. #

Project Name / Address: LRY

Contact Name & Phone: Michael McKinsey (406) 523-1150

Sampler's signature: Michael McKinsey

Invoice to: Envirocon
500 Taylor
Missoula, MT 59802

Report to:

DATE	TIME	composite	grab sample	SAMPLE I.D.	number of containers / Sample Type: A W S V U O (Air Water Soils/solids Vegetation Urine Other)	601								Comments, Special Instructions, etc.
5/21/96	1757			140101 - 1509 A,B	2 W	X								
↓	1848			- 1510 A,B	↓	X								
↓	1924			- 1511 A,B	↓	X								
5/22/96	1459			- 1512 A,B	↓	X								
↓	1528			- 1513 A,B	↓	X								
↓				- 1514 A,B	↓	X								
↓				- 1515 A,B	↓	X								

Analysis Requested

	Relinquished (signature)	Date	Time	Received by: (signature)		Relinquished (signature)	Date	Time	Received by (signature):
1.	Michael McKinsey	5/22/96	1625		3.				
2.					4.		05/23/96	1025	Received for laboratory by (signature): D Anderson

RECEIVED
JUN 13 1996

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Client: Envirocon, Inc.
Date Sampled: 22-MAY-96 17:58
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 09:21
File: /chem/IONTRAP2.i/vc060396.b/9633247a.d
Project Info: LRY
Sample Info: 140101-1516 Well #5

Lab No.: 96-33247
Report Date: 06/10/96 10:14
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.20J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.73	97	80--120
Toluene d8	10.0	9.64	96	80--120
p-Bromofluorobenzene	10.0	10.0	100	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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FAX (406) 252-6069 • 1-800-735-4489

Client: Envirocon, Inc.
Date Sampled: 22-MAY-96 17:58
Date Received: 25-MAY-96
Analysis Date: 07-JUN-1996 23:32
File: /chem/IONTRAP2.i/vc060796.b/9633247b.d
Project Info: LRY
Sample Info: 140101-1516 Well #B5 Lab. Dup

Lab No.: 96-33247 Duplicate
Report Date: 06/11/96 11:00
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.28J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U- Indicates compound was analyzed for but not detected.
J- Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 23-MAY-96 10:37
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 16:59
File: /chem/IONTRAP2.i/vc060496.b/9633248a.d
Project Info: LRY
Sample Info: 140101-1517 Well #3

Lab No.: 96-33248
Report Date: 06/10/96 16:24
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	0.20J
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.6	106	80--120
Toluene d8	10.0	8.12	81	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

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Client: Envirocon, Inc.
Date Sampled: 23-MAY-96 12:09
Date Received: 25-MAY-96
Analysis Date: 05-JUN-1996 00:14
File: /chem/IONTRAP2.i/vc060496.b/9633249a.d
Project Info: LRY
Sample Info: 140101-1518 Well #4

Lab No.: 96-33249
Report Date: 06/10/96 10:33
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**<0.50**	**0.31J**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	9.65	97	80--120
p-Bromofluorobenzene	10.0	9.50	95	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 23-MAY-96 14:47
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 18:33
File: /chem/IONTRAP2.i/vc060496.b/9633250a.d
Project Info: LRY
Sample Info: 140101-1519 LS-11

Lab No.: 96-33250
Report Date: 06/10/96 10:32
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**<0.50**	**0.22J**
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	**106-46-7**	**<0.50**	**0.29J**
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**10**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**34**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**6.8**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.0	100	80--120
Toluene d8	10.0	9.64	96	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
D= Value was derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

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Client: Envirocon, Inc.
Date Sampled: 23-MAY-96 14:50
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 19:20
File: /chem/IONTRAP2.i/vc060496.b/9633251a.d
Project Info: LRY
Sample Info: 140101-1520 LS-11 Field Dup.

Lab No.: 96-33251
Report Date: 06/10/96 10:33
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	**108-90-7**	**<0.50**	**0.21J**
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	**106-46-7**	**<0.50**	**0.28J**
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**10**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**28**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**6.7**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.75	98	80--120
Toluene d8	10.0	9.77	98	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
D= Value was derived from a 10 times dilution.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

ENERGY LABORATORIES

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Client: Envirocon, Inc.
Date Sampled: 23-MAY-96 15:36
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 21:00
File: /chem/IONTRAP2.i/vc060496.b/9633252a.d
Project Info: LRY
Sample Info: 140101-1521 90-3

Lab No.: 96-33252
Report Date: 06/10/96 10:33
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**2.8**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**29**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**2.6**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.3	103	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

D= Value was derived from a 5 times dilution.

REPORT COMMENTS: None

Analyst: ____ Reviewing Supervisor: ____

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Client: Envirocon, Inc.
Date Sampled: 24-MAY-96 14:16
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 21:50
File: /chem/IONTRAP2.i/vc060496.b/9633253a.d
Project Info: LRY
Sample Info: 140101-1522 89-10

Lab No.: 96-33253
Report Date: 06/10/96 10:33
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**8.3**	
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**55**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**5.5**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.6	106	80--120
Toluene d8	10.0	8.09	81	80--120
p-Bromofluorobenzene	10.0	9.42	94	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:
U= Indicates compound was analyzed for but not detected.
D= Value was derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ____ Reviewing Supervisor: ____

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Client: Envirocon, Inc.
Date Sampled: 24-MAY-96 15:05
Date Received: 25-MAY-96
Analysis Date: 04-JUN-1996 23:27
File: /chem/IONTRAP2.i/vc060496.b/9633254a.d
Project Info: LRY
Sample Info: 140101-1523 L-87-3

Lab No.: 96-33254
Report Date: 06/10/96 10:33
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	**156-59-2**	**14**	
trans-1,2-Dichloroethene	**156-60-5**	**1.2**	
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**76**	**D**
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**8.3**	
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.4	104	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.0	100	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
D= Value was derived from a 10 times dilution.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

Quality Control Sample: Laboratory Reagent Blank 04-JUN-1996 13:47
Report Date: 06/10/96 10:32
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060496.b/blk0604b.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	9.82	98	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Quality Control Sample: Laboratory Reagent Blank 04-JUN-1996 01:19
Report Date: 06/10/96 10:16
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060396.b/blk0604a.d
Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	9.97	100	80--120
p-Bromofluorobenzene	10.0	10.2	102	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

EPA METHOD 624 MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 08-JUN-96 00:19
Lab No.: 96-33249
Report Date: 06/10/96 08:36
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060796.b/9633249s.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
Chlorobenzene	5.00	<0.500	5.25	105	60--140
1,1-Dichloroethene	5.00	<0.500	4.90	98	60--140
Trichloroethene	5.00	<0.500	4.96	99	60--140

EPA METHOD 624 BLANK SPIKE REPORT

Quality Control Sample: Certified Reference Sample Analysis 06-JUN-96 06:42
Report Date: 06/11/96 13:34
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060796.b/qcs0606a.d

Remarks: This certified reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Added	Measured	%Rec	QC Limits
Carbon Tetrachloride	5.00	5.33	107	60--140
Chlorobenzene	5.00	4.56	91	60--140
1,4-Dichlorobenzene	5.00	4.82	96	60--140
1,2-Dichloroethane	5.00	5.00	100	60--140
1,1-Dichloroethene	5.00	5.24	105	60--140
trans-1,2-Dichloroethene	5.00	4.88	98	60--140
1,2-Dichloropropane	5.00	4.97	99	60--140
Tetrachloroethene	5.00	4.62	92	60--140
1,1,2-Trichloroethane	5.00	4.70	94	60--140
1,3-Dichlorobenzene	5.00	4.77	95	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.44	94	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

Lab Nos.: 96-33247 - 96-33254

Date: 25-MAY-96

Received by: Tim Rupp

Login Date: 28-MAY-96

Logged In by: Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form Completed & Signed	Yes	Comments:
Chain of Custody Seal	Yes	Comments:
Intact	Yes	Comments:
Signature Match Chain of Custody vs. Seal	Yes	Comments:
Samples Received Cold	Yes	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers	Yes	Comments:
Samples Received Properly Preserved	N/A	Comments:

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis. Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: By: Date/Time:

Method of Shipping: Greyhound 130 359 093 7

Additional comments:

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Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF CUSTODY RECORD

PLEASE PRINT OR TYPE ALL INFORMATION EXCEPT SIGNATURES

P.O. #

Project Name / Address: LRY

Contact Name & Phone: Mike McKinsey (406) 523-1150

Sampler's signature: Michael McKinsey

Invoice to:
Envirocon
500 Taylor
Missoula, MT 59802

Report to: ↓

DATE	TIME	composite	grab sample	SAMPLE I.D.	number of containers	Sample Type: A W S V U O Air Water Soils/solids Vegetation Urine Other	Analysis Requested 601								Comments, Special Instructions, etc.
5/22/96	1758			140101 – 1516 A,B	2	W	X								
5/23/96	1037			–1517 A,B			X								
	1209			–1518 A,B			X								
	1447			–1519 A,B			X								
	1450			–1520 A,B			X								
	1536			–1521 A,B			X								
5/24/96	1416			–1522 A,B			X								
	1505			–1523 A,B			X								

	Relinquished (signature)	Date	Time	Received by: (signature)
1.	Michael McKinsey	5/24/96	1624	
2.				
3.				
4.		5/25/96	11:10	Received for laboratory by (signature): Timothy Duff custody/seal intact

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LABORATORY REPORT

Page: 1

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-33575
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-33575
Sample Type : WATER
Sample Point : 140101-1524 92-1
Sample Date : 5/28/96
Sample Time : 1427
Sample Received : 5/30/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	6/07/96
Chlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloroethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethene	(µg/l)	<0.50	U	6/07/96
cis-1,2-Dichloroethene	(µg/l)	21	D	6/07/96
trans-1,2-Dichloroethene	(µg/l)	1.4		6/07/96
1,2-Dichloropropane	(µg/l)	<0.50	U	6/07/96
Methylene Chloride	(µg/l)	<0.50	U	6/07/96
Tetrachloroethene	(µg/l)	55	D	6/07/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	6/07/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	6/07/96
Trichloroethene	(µg/l)	<0.50(0.44)	J	6/07/96
Vinyl Chloride	(µg/l)	<0.50	U	6/07/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	6/07/96
Bromodichloromethane	(µg/l)	<0.50	U	6/07/96
Bromoform	(µg/l)	<0.50	U	6/07/96
Bromomethane	(µg/l)	<0.50	U	6/07/96
Chlorodibromomethane	(µg/l)	<0.50	U	6/07/96
Chloroform	(µg/l)	0.66		6/07/96
Chloroethane	(µg/l)	<0.50	U	6/07/96
Chloromethane	(µg/l)	<0.50	U	6/07/96
2-Chlorotoluene	(µg/l)	<0.50	U	6/07/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethane	(µg/l)	<0.50	U	6/07/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
Fluorotrichloromethane	(µg/l)	<0.50	U	6/07/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	6/07/96

) Value was derived from a 10 times dilution.
] Estimated value. Present, but less than the limit of quantitation.
J Indicates compound was analyzed for but not detected.

Lab No. 96-33575

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added μg/L	Amount Measured μg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.85	98	80--120
Toluene d8	10.0	8.14	81	80--120
p-Bromofluorobenzene	10.0	9.76	98	80--120

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-33576
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-33576
Sample Type : WATER
Sample Point : 140101-1525 89-3
Sample Date : 5/28/96
Sample Time : 1538
Sample Received : 5/30/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	6/07/96
Chlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloroethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethene	(µg/l)	<0.50	U	6/07/96
cis-1,2-Dichloroethene	(µg/l)	0.54		6/07/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloropropane	(µg/l)	<0.50	U	6/07/96
Methylene Chloride	(µg/l)	<0.50	U	6/07/96
Tetrachloroethene	(µg/l)	205	D	6/07/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	6/07/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	6/07/96
Trichloroethene	(µg/l)	1.4		6/07/96
Vinyl Chloride	(µg/l)	<0.50	U	6/07/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	6/07/96
Bromodichloromethane	(µg/l)	<0.50	U	6/07/96
Bromoform	(µg/l)	<0.50	U	6/07/96
Bromomethane	(µg/l)	<0.50	U	6/07/96
Chlorodibromomethane	(µg/l)	<0.50	U	6/07/96
Chloroform	(µg/l)	<0.50	U	6/07/96
Chloroethane	(µg/l)	<0.50	U	6/07/96
Chloromethane	(µg/l)	<0.50	U	6/07/96
2-Chlorotoluene	(µg/l)	<0.50	U	6/07/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethane	(µg/l)	<0.50	U	6/07/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
Fluorotrichloromethane	(µg/l)	<0.50	U	6/07/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	6/07/96

D Value was derived from a 20 times dilution.
U Indicates compound was analyzed for but not detected.

Lab No. 96-33576

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.68	97	80--120
Toluene d8	10.0	9.35	94	80--120
p-Bromofluorobenzene	10.0	9.55	96	80--120

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LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-33577
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-33577
Sample Type : WATER
Sample Point : 140101-1526 L-87-5
Sample Date : 5/28/96
Sample Time : 1657
Sample Received : 5/30/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	6/07/96
Chlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloroethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethene	(µg/l)	<0.50	U	6/07/96
cis-1,2-Dichloroethene	(µg/l)	0.91		6/07/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloropropane	(µg/l)	<0.50	U	6/07/96
Methylene Chloride	(µg/l)	<0.50	U	6/07/96
Tetrachloroethene	(µg/l)	64	D	6/07/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	6/07/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	6/07/96
Trichloroethene	(µg/l)	3.4		6/07/96
Vinyl Chloride	(µg/l)	<0.50	U	6/07/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	6/07/96
Bromodichloromethane	(µg/l)	<0.50	U	6/07/96
Bromoform	(µg/l)	<0.50	U	6/07/96
Bromomethane	(µg/l)	<0.50	U	6/07/96
Chlorodibromomethane	(µg/l)	<0.50	U	6/07/96
Chloroform	(µg/l)	<0.50	U	6/07/96
Chloroethane	(µg/l)	<0.50	U	6/07/96
Chloromethane	(µg/l)	<0.50	U	6/07/96
2-Chlorotoluene	(µg/l)	<0.50	U	6/07/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethane	(µg/l)	<0.50	U	6/07/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
Fluorotrichloromethane	(µg/l)	<0.50	U	6/07/96
1,1,2,2-Tetrachloroethane	(µg/l)	<0.50	U	6/07/96

D Value was derived from a 10 times dilution.
U Indicates compound was analyzed for but not detected.

Lab No. 96-33577

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.99	100	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	9.91	99	80--120

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LABORATORY REPORT

Page: 1

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-33578
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-33578
Sample Type : WATER
Sample Point : 140101-1527 89-6
Sample Date : 5/28/96
Sample Time : 1803
Sample Received : 5/30/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(µg/l)	<0.50	U	6/07/96
Chlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,4-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloroethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethene	(µg/l)	<0.50	U	6/07/96
cis-1,2-Dichloroethene	(µg/l)	<0.50	U	6/07/96
trans-1,2-Dichloroethene	(µg/l)	<0.50	U	6/07/96
1,2-Dichloropropane	(µg/l)	<0.50	U	6/07/96
Methylene Chloride	(µg/l)	<0.50	U	6/07/96
Tetrachloroethene	(µg/l)	16		6/07/96
1,1,1-Trichloroethane	(µg/l)	<0.50	U	6/07/96
1,1,2-Trichloroethane	(µg/l)	<0.50	U	6/07/96
Trichloroethene	(µg/l)	<0.50(0.19)	J	6/07/96
Vinyl Chloride	(µg/l)	<0.50	U	6/07/96
2-Chloroethylvinyl ether	(µg/l)	<0.50	U	6/07/96
Bromodichloromethane	(µg/l)	<0.50	U	6/07/96
Bromoform	(µg/l)	<0.50	U	6/07/96
Bromomethane	(µg/l)	<0.50	U	6/07/96
Chlorodibromomethane	(µg/l)	<0.50	U	6/07/96
Chloroform	(µg/l)	<0.50	U	6/07/96
Chloroethane	(µg/l)	<0.50	U	6/07/96
Chloromethane	(µg/l)	<0.50	U	6/07/96
2-Chlorotoluene	(µg/l)	<0.50	U	6/07/96
1,3-Dichlorobenzene	(µg/l)	<0.50	U	6/07/96
Dichlorodifluoromethane	(µg/l)	<0.50	U	6/07/96
1,1-Dichloroethane	(µg/l)	<0.50	U	6/07/96
cis-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
trans-1,3-Dichloropropene	(µg/l)	<0.50	U	6/07/96
Fluorotrichloromethane	(µg/l)	<0.50	U	6/07/96
1,1,2,2-Tetrachloroethane	(µg/l)			

J Estimated value. Present, but less than the limit of quantitation.
U Indicates compound was analyzed for but not detected.

Lab No. 96-33578

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	10.4	104	80--120
Toluene d8	10.0	8.01	80	80--120
p-Bromofluorobenzene	10.0	9.88	99	80--120

ENERGY LABORATORIES
ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

LABORATORY REPORT

To : Envirocon, Inc.
Address : Mike McKinsey
P.O. Box 8243
Missoula, MT 59807

Lab No. : 96-33579
Date : 6/24/96

GENERAL INFORMATION:

Laboratory No. : 96-33579
Sample Type : WATER
Sample Point : 140101-1528 Equip. Blank
Sample Date : 5/28/96
Sample Time : 1819
Sample Received : 5/30/96

LABORATORY DATA:

		Result		Date Analyzed
Carbon Tetrachloride	(μg/l)	<0.50	U	6/08/96
Chlorobenzene	(μg/l)	<0.50	U	6/08/96
1,2-Dichlorobenzene	(μg/l)	<0.50	U	6/08/96
1,4-Dichlorobenzene	(μg/l)	<0.50	U	6/08/96
1,2-Dichloroethane	(μg/l)	<0.50	U	6/08/96
1,1-Dichloroethene	(μg/l)	<0.50	U	6/08/96
cis-1,2-Dichloroethene	(μg/l)	<0.50	U	6/08/96
trans-1,2-Dichloroethene	(μg/l)	<0.50	U	6/08/96
1,2-Dichloropropane	(μg/l)	<0.50	U	6/08/96
Methylene Chloride	(μg/l)	<0.50	U	6/08/96
Tetrachloroethene	(μg/l)	<0.50	U	6/08/96
1,1,1-Trichloroethane	(μg/l)	<0.50	U	6/08/96
1,1,2-Trichloroethane	(μg/l)	<0.50	U	6/08/96
Trichloroethene	(μg/l)	<0.50	U	6/08/96
Vinyl Chloride	(μg/l)	<0.50	U	6/08/96
2-Chloroethylvinyl ether	(μg/l)	<0.50	U	6/08/96
Bromodichloromethane	(μg/l)	<0.50	U	6/08/96
Bromoform	(μg/l)	<0.50	U	6/08/96
Bromomethane	(μg/l)	<0.50	U	6/08/96
Chlorodibromomethane	(μg/l)	<0.50	U	6/08/96
Chloroform	(μg/l)	<0.50	U	6/08/96
Chloroethane	(μg/l)	<0.50	U	6/08/96
Chloromethane	(μg/l)	<0.50	U	6/08/96
2-Chlorotoluene	(μg/l)	<0.50	U	6/08/96
1,3-Dichlorobenzene	(μg/l)	<0.50	U	6/08/96
Dichlorodifluoromethane	(μg/l)	<0.50	U	6/08/96
1,1-Dichloroethane	(μg/l)	<0.50	U	6/08/96
cis-1,3-Dichloropropene	(μg/l)	<0.50	U	6/08/96
trans-1,3-Dichloropropene	(μg/l)	<0.50	U	6/08/96
Fluorotrichloromethane	(μg/l)	<0.50	U	6/08/96
1,1,2,2-Tetrachloroethane				

U Indicates compound was analyzed for but not detected.

Lab No. 96-33579

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	10.3	103	80--120
p-Bromofluorobenzene	10.0	9.79	98	80--120

Lab No. 96-33580

SURROGATE RECOVERY REPORT

Surrogate Compound	Amount Added µg/L	Amount Measured µg/L	% Recovered	QC Limits % Recovery
1,2-Dichloroethane d4	10.0	9.78	98	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.0	100	80--120

Client: Envirocon, Inc.
Date Sampled: 28-MAY-96 18:03
Date Received: 30-MAY-96
Analysis Date: 12-JUN-1996 11:46
File: /chem/IONTRAP2.i/vc061296.b/9633578b.d
Project Info: LRY
Sample Info: 140101-1527 89-6 Lab Dup

Lab No.: 96-33578 Duplicate
Report Date: 06/14/96 13:08
Extraction Method: EPA 5030
Sample Matrix: WATER; pH < 2

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	**127-18-4**	**16**	
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	**79-01-6**	**<0.50**	**0.21J**
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.5	105	80--120
Toluene d8	10.0	8.90	89	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.
J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: MAB

Quality Control Sample: Laboratory Reagent Blank 07-JUN-1996 14:44
Report Date: 06/12/96 15:01
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060796.b/blk0607b.d

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 624
VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)

COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Carbon Tetrachloride	56-23-5	<0.50	U
Chlorobenzene	108-90-7	<0.50	U
1,2-Dichlorobenzene	95-50-1	<0.50	U
1,4-Dichlorobenzene	106-46-7	<0.50	U
1,2-Dichloroethane	107-06-2	<0.50	U
1,1-Dichloroethene	75-35-4	<0.50	U
cis-1,2-Dichloroethene	156-59-2	<0.50	U
trans-1,2-Dichloroethene	156-60-5	<0.50	U
1,2-Dichloropropane	78-87-5	<0.50	U
Methylene Chloride	75-09-2	<0.50	U
Tetrachloroethene	127-18-4	<0.50	U
1,1,1-Trichloroethane	71-55-6	<0.50	U
1,1,2-Trichloroethane	79-00-5	<0.50	U
Trichloroethene	79-01-6	<0.50	U
Vinyl Chloride	75-01-4	<0.50	U
2-Chloroethylvinyl ether	110-75-8	<0.50	U
Bromodichloromethane	75-27-4	<0.50	U
Bromoform	75-25-2	<0.50	U
Chlorodibromomethane	124-48-1	<0.50	U
Chloroform	67-66-3	<0.50	U
Bromomethane	74-83-9	<0.50	U
Chloroethane	75-00-3	<0.50	U
Chloromethane	74-87-3	<0.50	U
2-Chlorotoluene	95-49-8	<0.50	U
1,3-Dichlorobenzene	541-73-1	<0.50	U
Dichlorodifluoromethane	75-71-8	<0.50	U
1,1-Dichloroethane	75-34-3	<0.50	U
cis-1,3-Dichloropropene	10061-01-5	<0.50	U
trans-1,3-Dichloropropene	10061-02-6	<0.50	U
Fluorotrichloromethane	75-69-4	<0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.64	96	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ______ Reviewing Supervisor: ______

EPA METHOD 624 BLANK SPIKE REPORT

Quality Control Sample: Certified Reference Sample Analysis 06-JUN-96 06:42
Report Date: 06/11/96 13:34
Extraction Method: EPA 5030
Sample Matrix: WATER
File: /chem/IONTRAP2.i/vc060796.b/qcs0606a.d
Remarks: This certified reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Added	Measured	%Rec	QC Limits
Carbon Tetrachloride	5.00	5.33	107	60--140
Chlorobenzene	5.00	4.56	91	60--140
1,4-Dichlorobenzene	5.00	4.82	96	60--140
1,2-Dichloroethane	5.00	5.00	100	60--140
1,1-Dichloroethene	5.00	5.24	105	60--140
trans-1,2-Dichloroethene	5.00	4.88	98	60--140
1,2-Dichloropropane	5.00	4.97	99	60--140
Tetrachloroethene	5.00	4.62	92	60--140
1,1,2-Trichloroethane	5.00	4.70	94	60--140
1,3-Dichlorobenzene	5.00	4.77	95	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added ug/L	Measured ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.44	94	80--120
Toluene d8	10.0	10.0	100	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

REPORT COMMENTS: None

Analyst: ________ Reviewing Supervisor: ________

Lab Nos.: 96-33575 - 96-33580

Date: 30-MAY-96

Received by: Randa Hoelscher

Logged In by: Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form Completed & Signed	Yes	Comments:
Chain of Custody Seal	Yes	Comments:
Intact	Yes	Comments:
Signature Match Chain of Custody vs. Seal	Yes	Comments:
Samples Received Cold	Yes	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers	Yes	Comments:
Samples Received Properly Preserved	N/A	Comments:

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis. Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: By: Date/Time:

Method of Shipping: Greyhound 151 738 002 9

Additional comments:

ENVIROCON, INC.

CHAIN OF CUSTODY RECORD

PROJ. NO. 140101

PROJECT NAME LRY

SAMPLERS: (Signature) Michael McKinzey (406) 523-1150

SAMPLED VOLUME	DATE	TIME	COMP.	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	601						REMARKS
2-40mL	5/28/96	1427			140101-1524 A,B	2	X						
↓		1538			-1525 A,B	2	X						
	↓	1657			-1526 A,B	2	X						
		1803			-1527 A,B	2	X						
		1819			-1528 A,B	2	X						
	5/29/96	923			-1529 A,B	2	X						

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Michael McKinzey	5/29/96 1651				
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Chain of Custody Seal:

Intact? [✓ yes] no) Intact

Lab Personnel (receiving)

Signature: Linda Hoelscher 05/30/96 @ 1455

Remarks

Split Samples:

[] Accepted [] Declined ______

Signature

APPENDIX B

DATA VALIDATION REPORT

DATA VALIDATION REPORT FOR GROUND WATER ANALYSES
LIVINGSTON RAIL YARD, LIVINGSTON, MONTANA
AUGUST 1995, NOVEMBER 1995, AND MAY 1996 SAMPLING ROUNDS

1.0 INTRODUCTION

Data validation levels have been established for the sample rounds according to the criteria described in Appendix 1.A of the Remedial Investigation Report (Envirocon, 1994). The data validation levels and codes for the Livingston Rail Yard project are based on the U.S. Environmental Protection Agency region VIII guidance, "Evaluation Criteria for Existing Data from CERCLA Study Areas", Revision 1, January 5, 1985.

Table 1 lists the samples taken during the quarterly, semiannual, and annual sample rounds between August 1995 and May 1996.

Table 1.0
August 1995, November 1995, and May 1996 Ground Water Samples

Sample Number	Sample Location Location	Laboratory ID #	Sample Date Date	EPA Method
140101-1450	L-87-3	95-52875	8/21/95	EPA 624
140101-1451	L-87-3	95-52876	8/21/95	EPA 624
140101-1452	90-6	95-52877	8/22/95	EPA 624
140101-1453	92-1	95-52878	8/22/95	EPA 624
140101-1454	L-87-5	95-52879	8/22/95	EPA 624
140101-1455	89-4	95-52880	8/22/95	EPA 624
140101-1455	89-4	95-52880 Duplicate	8/22/95	EPA 624
140101-1456	L-87-2	95-52881	8/22/95	EPA 624
140101-1457	L-87-2	95-52882	8/22/95	EPA 624
140101-1458	Equipment Blank	95-52883	8/22/95	EPA 624
140101-1459	L-88-10	95-53349	8/23/95	EPA 624
140101-1460	L-87-8	95-53350	8/23/95	EPA 624
140101-1461	5	95-53351	8/23/95	EPA 624
140101-1462	92-3	95-53352	8/23/95	EPA 624
140101-1463	92-3	95-53353	8/23/95	EPA 624
140101-1464	94-2	95-53354	8/24/95	EPA 624
140101-1465	94-2	95-53355	8/24/95	EPA 624
140101-1466	Equipment Blank	95-53356	8/24/95	EPA 624
140101-1467	89-2	95-54758	9/5/95	EPA 624
140101-1468	92-2	95-54759	9/5/95	EPA 624
140101-1469	92-2	95-54760	9/5/95	EPA 624
140101-1470	92-4	95-54761	9/6/95	EPA 624
140101-1471	LS-11	95-54762	9/6/95	EPA 624
140101-1472	94-1	95-54763	9/6/95	EPA 624
140101-1473	Equipment Blank	95-54764	9/6/95	EPA 624
140101-1473	Equipment Blank	95-54764 Duplicate	9/6/95	EPA 624
140101-1474	89-3	95-54765	9/6/95	EPA 624
140101-1475	89-3	95-54766	9/6/95	EPA 624
140101-1476	89-9	95-54767	9/6/95	EPA 624
140101-1477	94-2	95-70077	11/29/95	EPA 624
140101-1478	92-2	95-70078	11/29/95	EPA 624

Table 1.0 (cont.)
August 1995 through May 1996 Ground Water Samples

Sample Number	Sample Location Location	Laboratory ID #	Sample Date Date	EPA Method
140101-1479	Equipment Blank	95-70079	11/29/95	EPA 624
140101-1480	LS-11	95-70080	11/30/95	EPA 624
140101-1481	89-2	95-70081	11/30/95	EPA 624
140101-1482	89-2	95-70082	11/30/95	EPA 624
140101-1483	L-87-3	95-70083	11/30/95	EPA 624
140101-1484	L-88-10	95-70084	11/30/95	EPA 624
140101-1485	L-87-8	95-70085	11/30/95	EPA 624
140101-1486	92-3	95-70086	11/30/95	EPA 624
140101-1487	90-6	95-70310	12/1/95	EPA 624
140101-1488	L-87-5	95-70311	12/1/95	EPA 624
140101-1489	L-87-5	95-70312	12/1/95	EPA 624
140101-1490	89-4	95-70313	12/1/95	EPA 624
140101-1491	6	95-70314	12/1/95	EPA 624
140101-1492	5	95-70315	12/1/95	EPA 624
140101-1493	L-87-2	95-70316	12/1/95	EPA 624
140101-1494	92-1	95-70317	12/2/95	EPA 624
140101-1495	89-9	95-70318	12/2/95	EPA 624
140101-1496	89-3	95-70319	12/2/95	EPA 624
140101-1497	94-1	95-70320	12/2/95	EPA 624
140101-1497	94-1	95-70320 Duplicate	12/2/95	EPA 624
140101-1498	92-4	95-70321	12/2/95	EPA 624
140101-1499	92-4	95-70322	12/2/95	EPA 624
140101-1500	1	95-79023	12/3/95	EPA 624
140101-1501	89-2	96-32789	5/20/96	EPA 624
140101-1502	L-87-2	96-32790	5/20/96	EPA 624
140101-1503	L-87-4	96-32791	5/20/96	EPA 624
140101-1504	B STREET	96-32792	5/21/96	EPA 624
140101-1505	L-87-8	96-32793	5/21/96	EPA 624
140101-1506	94-2	96-32794	5/21/96	EPA 624
140101-1507	94-2	96-32795	5/21/96	EPA 624
140101-1508	94-1	96-32796	5/21/96	EPA 624
140101-1509	92-2	96-32989	5/21/96	EPA 624
140101-1510	L-88-10	96-32990	5/21/96	EPA 624
140101-1511	L-88-13	96-32991	5/21/96	EPA 624
140101-1512	89-4	96-32992	5/22/96	EPA 624
140101-1513	92-4	96-32993	5/22/96	EPA 624
140101-1514	6	96-32994	5/22/96	EPA 624
140101-1515	6	96-32995	5/22/96	EPA 624
140101-1516	5	96-33247	5/22/96	EPA 624
140101-1517	3	96-33248	5/23/96	EPA 624
140101-1518	4	96-33249	5/23/96	EPA 624
140101-1519	LS-11	96-33250	5/23/96	EPA 624
140101-1520	LS-11	96-33251	5/23/96	EPA 624
140101-1521	90-3	96-33252	5/23/96	EPA 624
140101-1522	89-10	96-33253	5/24/96	EPA 624
140101-1523	L-87-3	96-33254	5/24/96	EPA 624
140101-1524	92-1	96-33575	5/28/96	EPA 624
140101-1525	89-3	96-33576	5/28/96	EPA 624
140101-1526	L-87-5	96-33577	5/28/96	EPA 624
140101-1527	89-6	96-33578	5/28/96	EPA 624
140101-1528	Equipment Blank	96-33579	5/28/96	EPA 624
140101-1529	2	96-33580	5/29/96	EPA 624

2.0 EVALUATION OF BLANK ANALYSES

Laboratory and field blanks were analyzed for these sample rounds as summarized in Table 2. All of the laboratory blanks were reagent blanks. All of the field blanks were equipment decontamination blanks. No trip blanks were analyzed during these sample rounds.

Table 2.0
Field and Laboratory Blanks

Sample Number	Sample Type	Laboratory ID #	Sample Date	EPA Analytical Method
140101-1458	Equipment Blank	95-52883	8/22/95	EPA 624
140101-1466	Equipment Blank	95-53356	8/24/95	EPA 624
140101-1473	Equipment Blank	95-54764	9/6/95	EPA 624
140101-1473	Equipment Blank	95-54764 Lab Dup.	9/6/95	EPA 624
140101-1479	Equipment Blank	95-70079	11/29/95	EPA 624
140101-1528	Equipment Blank	96-33579	5/28/96	EPA 624
N/A	Reagent Blank	Reagent Blank	8/29/95	EPA 624
N/A	Reagent Blank	Reagent Blank	9/6/95	EPA 624
N/A	Reagent Blank	Reagent Blank	9/6/95	EPA 624
N/A	Reagent Blank	Reagent Blank	9/13/95	EPA 624
N/A	Reagent Blank	Reagent Blank	9/13/95	EPA 624
N/A	Reagent Blank	Reagent Blank	9/14/95	EPA 624
N/A	Reagent Blank	Reagent Blank	9/16/95	EPA 624
N/A	Reagent Blank	Reagent Blank	8/30/95	EPA 624
N/A	Reagent Blank	Reagent Blank	12/9/95	EPA 624
N/A	Reagent Blank	Reagent Blank	12/11/95	EPA 624
N/A	Reagent Blank	Reagent Blank	12/14/95	EPA 624
N/A	Reagent Blank	Reagent Blank	12/15/95	EPA 624

Notes: N/A - Not applicable

Table 3 summarizes the compounds detected in the blanks. All detections were in the equipment decontamination blanks. All of the decontamination blanks were taken of the rinsate used to clean a stainless steel bailer.

Equipment blank 140101-1458 was collected after the bailer was used to sample well 92-1 and prior to its use in well L-88-10. None of the compounds detected in this blank were above the practical quantification limits for EPA Method 601/624. Due to the relatively larger chlorobenzene (7.8 ug/l) and tetrachloroethene (29 ug/l) concentrations detected in well L-88-10, the detections in the equipment blank is assumed to have no impact on data quality.

Equipment blank 140101-1466 was collected after the bailer was used to sample well 94-2. The next sample taken with the bailer was twelve days later from well 94-1. Neither of the compounds detected (chloroform and 1,4-dichlorobenzene) was detected in the samples from wells 94-2 and 94-1. Therefore, these detections in the blanks can be assumed to have no impact on data quality.

Equipment blank 140101-1479 was collected after the bailer was used to sample well 94-2. Neither of the compounds detected (chloroform and methylene chloride) are ground water contaminants at the LRY and therefore most likely represent residues from the methanol used for decontamination or are laboratory contaminants. These detections do not affect data quality for the ground water samples.

Table 3
Detections in Blank Samples

Sample Number	Sample Date	Sample Type	Compound Detected	Concentration (ug/l)
140101-1458	8/22/95	Equip. Blank	chlorobenzene	0.2J
140101-1458	8/22/95	Equip. Blank	tetrachloroethene	0.46J
140101-1458	8/22/95	Equip. Blank	chloroform	0.36J
140101-1466	8/24/95	Equip. Blank	1,4-dichlorobenzene	0.1J
140101-1466	8/24/95	Equip. Blank	chloroform	0.18J
140101-1479	11/29/95	Equip. Blank	methylene chloride	0.77
140101-1479	11/29/95	Equip. Blank	chloroform	0.46J

Notes: J - detection was below the practical quantification limit.

3.0 EVALUATION OF DUPLICATE ANALYSES

Twelve sets of field duplicates and three sets of laboratory duplicates were analyzed during the August 1995, November 1995, and May 1996 sample rounds. Table 4.0 summarizes the locations and dates of the duplicate samples.

With the exception of samples 140101-1456 and -1457, none of the duplicate samples exceeded a relative percent difference of 30%. Sample 140101-1456 (primary sample) contained some type of foam when it was received at the laboratory. This condition required the detection limits for this sample to be raised to 25 ug/l, therefore this sample can not be evaluated against its field duplicate (140101-1457). Due to the foam present in sample 140101-1456, it will be assigned a validation level of unusable.

Table 4
Duplicate Sample Analyses

Sample Location	Sample Type	Sample Type	Laboratory ID #	Sample Date	EPA Method
140101-1450	L-87-3	Primary	95-52875	8/21/95	624
140101-1451	L-87-3	Field Duplicate	95-52876	8/21/95	624
140101-1455	89-4	Primary	95-52880	8/22/95	624
140101-1455	89-4	Laboratory Duplicate	95-52880 Duplicate	8/22/95	624
140101-1456	L-87-2	Primary	95-52881	8/22/95	624
140101-1457	L-87-2	Field Duplicate	95-52882	8/22/95	624
140101-1462	92-3	Primary	95-53352	8/23/95	624
140101-1463	92-3	Field Duplicate	95-53353	8/23/95	624
140101-1464	94-2	Primary	95-53354	8/24/95	624
140101-1465	94-2	Field Duplicate	95-53355	8/24/95	624
140101-1468	92-2	Primary	95-54759	9/5/95	624
140101-1469	92-2	Field Duplicate	95-54760	9/5/95	624

Table 3.0 (cont.)
Duplicate Sample Analyses

Sample Location	Sample Type	Sample Type	Laboratory ID #	Sample Date	EPA Method
140101-1473	BLANK	Primary	95-54764	9/6/95	624
140101-1473	BLANK	Laboratory Duplicate	95-54764 Duplicate	9/6/95	624
140101-1474	89-3	Primary	95-54765	9/6/95	624
140101-1475	89-3	Field Duplicate	95-54766	9/6/95	624
140101-1481	89-2	Primary	95-70081	11/30/95	624
140101-1482	89-2	Field Duplicate	95-70082	11/30/95	624
140101-1488	L-87-5	Primary	95-70311	12/1/95	624
140101-1489	L-87-5	Field Duplicate	95-70312	12/1/95	624
140101-1497	94-1	Primary	95-70320	12/2/95	624
140101-1497	94-1	Laboratory Duplicate	95-70320 Duplicate	12/2/95	624
140101-1498	92-4	Primary	95-70321	12/2/95	624
140101-1499	92-4	Field Duplicate	95-70322	12/2/95	624
140101-1506	94-2	Primary	96-32794	5/21/96	624
140101-1507	94-2	Field Duplicate	96-32795	5/21/96	624
140101-1514	6	Primary	96-32994	5/22/96	624
140101-1515	6	Field Duplicate	96-32995	5/22/96	624
140101-1519	LS-11	Primary	96-33250	5/23/96	624
140101-1520	LS-11	Field Duplicate	96-33251	5/23/96	624

4.0 EVALUATION OF HOLDING TIMES

All of the samples were preserved by being acidified to pH values below 2.0. Properly preserved samples for analysis by EPA Method 601/624 can be stored for up to 14 days prior to analysis. A review of all holding times revealed that none of the samples collected during these sample round exceeded 14-day holding period.

5.0 EVALUATION OF MATRIX AND SURROGATE SPIKE RESULTS

All matrix spike and surrogate spike recoveries were within acceptable limits. All U.S. EPA water supply quality control samples were within recovery limits. The matrix spike, surrogate spike, and U.S. EPA water supply quality control sample results are provided in Appendix A of this report.

6.0 MISCELLANEOUS QA/QC EVALUATIONS

The laboratory report for sample 140101-1456 indicates that this sample had a foaming matrix when it was received at the laboratory. For this reason, the sample had to be diluted by a factor of 50. This increased the practical quantification limit by a factor of 50 (to 25 ug/l). The source of the foam is not known; however, due to the increased practical quantification limits and the potential for transfer of VOCs from the water into the foam, the results of sample 140101-1456 have been downgraded to unusable.

7.0 VALIDATION LEVEL ASSIGNMENTS

All analytical results for the August 1995 through May 1996 sample rounds are acceptable for quantitative data analysis except those listed in Table 5.

TABLE 5
Analytical Results Degrade to Unusable Status

Sample Location	Sample Date	Sample Number	Laboratory Number	Chemical Name	Concentration (ug/l)		Validation Qualifier
L-87-2	8/22/95	140101-1456	95-52881	Carbon Tetrachloride	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Chlorobenzene	34	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,2-Dichlorobenzene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,4-Dichlorobenzene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,2-Dichloroethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,1-Dichloroethene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	cis-1,2-Dichloroethene	40	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	trans-1,2-Dichloroethene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,2-Dichloropropane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Methylene Chloride	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Tetrachloroethene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,1,1-Trichloroethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,1,2-Trichloroethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Trichloroethene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Vinyl chloride	43	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	2-Chloroethylvinyl ether	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Bromodichloromethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Bromoform	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Dibromochloromethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Chloroform	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Bromomethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Chloroethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Chloromethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	2-Chlorotoluene	54	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,3-Dichlorobenzene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Dichlorodifluoromethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,1-Dichloroethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	cis-1,3-Dichloropropene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	trans-1,3-Dichloropropene	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	Fluorotrichloromethane	< 25	ug/L	U
L-87-2	8/22/95	140101-1456	95-52881	1,1,2,2-Tetrachloroethane	< 25	ug/L	U